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COMPETITION IN TRANSPORTATION

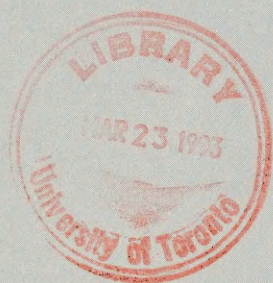
POLICY AND LEGISLATION IN REVIEW

VOLUME II



**NATIONAL TRANSPORTATION
ACT REVIEW COMMISSION**





COMPETITION IN TRANSPORTATION

POLICY AND LEGISLATION IN REVIEW

VOLUME II



**NATIONAL TRANSPORTATION
ACT REVIEW COMMISSION**

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Catalogue No. CP32-59/2-1993E
ISBN 0-660-14935-4 (Vol. II)

Publié aussi en français sous le titre *La concurrence dans les transports :
regard sur la politique et la législation*

Available in Canada through: Associated Bookstores and other booksellers
or by mail from: Canada Communication Group — Publishing
Ottawa, Canada K1A 0S9

Canadian Cataloguing in Publication Data

National Transportation Act Review Commission (Canada)

Competition in transportation: policy and legislation in review

Issued also in French under title: *La concurrence dans les transports.*

Chairman: Gilles Rivard.

Complete works consists of vol. I and II.

Includes bibliographical references.

ISBN 0-660-14934-6 (vol. I)

ISBN 0-660-14935-4 (vol. II)

DSS cat. no. CP32-59/1-1993E

DSS cat. no. CP32-59/2-1993E

1. Transportation — Law and legislation — Canada. 2. Transportation —
Passenger traffic — Government policy — Canada. 3. Carriers — Government
policy — Canada. 4. Competition — Canada. I. Title.

HE215.N37 1993

388'.0971

C93-099443-4

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Foreword

The purpose of this Research Report is to present in greater detail research findings relevant to the matters considered by the Commission and reported in Volume I. The Research Report presents a general transportation overview; an examination of the various transport modes; a review of several transport issues that are not mode specific; and an analysis of several legal issues.

The economic research for the Commission was carried out by its Research Group, with Dr. John Heads as the Director of Research. Commission staff in the Research Group were Michel Champoux, John Cowan, Arvo Ray and Rod Taylor. In addition to the research carried out within the Commission, a number of consultant reports were commissioned and these are listed in Appendix 1.

The legal research was carried out under the direction of the Commission's Legal Counsel, George Heinmiller. Commission staff involved in this work were William Sharpe, Tom Gussman, Gregory Flude and Howard Greenberg. In addition to the legal work carried out within the Commission, several research studies were also commissioned and these are listed in Appendix 2.

1

Introduction

The main findings of the National Transportation Act Review Commission (NTARC) are contained in Volume I of the Commission's report. This gives the Commission's overview appraisal of transportation in Canada, together with the recommendations on the various issues examined. It was not appropriate to give detailed research analysis in Volume I, and the purpose of Volume II is to go some way towards filling this gap.

To review briefly the background of the work of the NTARC, the Government of Canada made major changes to the regulation of transport in 1987. The thrust of these changes was to rely increasingly on competition and market forces to secure "a safe, economic, efficient and adequate network of viable and effective transportation services," with economic regulation of transport carriers kept to a minimum. The new legislation of 1987 consisted of the *National Transportation Act (NTA, 1987)*, the *Shipping Conferences Exemption Act (SCEA)* and the *Motor Vehicle Transport Act (MVTA)*, together with amendments to other legislation such as the *Railway Act*. Section 266 of the *NTA, 1987* provided for a comprehensive review of this legislation and related matters, with the report on this review to be submitted to the Minister of Transport no later than January 31, 1993.

The mandate of the NTARC was extensive. In addition to specific matters to be considered, the Commission was also instructed to examine the "overall effectiveness" of the 1987 legislation. The time duration for the work was modest and the NTARC had to proceed at an intense pace. Although it is not necessary to describe the organization of this work in detail, it is useful to give a general indication of how the Commission obtained the inputs to its work.

The Commission undertook an extensive process of consultation. This commenced with meetings with interested parties, selected by the Commission, in order to obtain information on specified transport issues. Submissions were also requested from stakeholders in the transport field and a total of 161 submissions were received. This was followed by meetings with a large number of stakeholders to obtain further verbal information and answers to specific questions based on material contained in the submissions.

The NTARC spent 25 days meeting with people providing information requested by the Commission and a further 24 days in meetings with organizations providing formal submissions to the Commission. In all, meetings took place with 41 organizations who provided informational briefs and with 65 organizations in respect of their submissions.



The organizations meeting with the Commission included shippers, carriers, trade associations, federal and provincial government departments and public interest groups.

In addition to numerous meetings in Ottawa, meetings were held in Halifax, Montreal, Toronto, Winnipeg, Regina, Edmonton and Vancouver. Individual Commissioners visited other cities — St. John's, Charlottetown, Fredericton and Thunder Bay. The Commission also visited Washington, D.C., to gather information from transport regulatory authorities in the United States. In short, the public input into the deliberations of the NTARC was substantial.

The second major information source used by the NTARC was an extensive program of economic research in transportation. Research staff were recruited in-house or secondment from organizations in several parts of Canada — Quebec City, Ottawa, Toronto and Winnipeg. Transport research findings were examined from a multitude of studies carried out in Canada and abroad in recent years, and considerable research and analysis were undertaken by the Commission staff. Outside consultancy contracts were issued covering general issues such as transport subsidies, transport and the environment, and labour-management relations in transport, while other contracts addressed specific problems relating to transport regulation in the air, highway and railway transport modes. A full list of economic research studies, together with a brief summary of their findings, is given in Appendix 1. Because the NTARC did not wish to duplicate the work of the Royal Commission on National Passenger Transportation, which had been ongoing since 1989, it will be noted that none of these studies was focussed specifically on passenger transport.

The Commission also initiated extensive legal research as background to its deliberations and as an essential input to the formulation of recommendations. This program covered overall legal issues, such as the relationship between the *Competition Act* and the *NTA, 1987*, and specific issues, such as the use of railway right-of-way after line abandonment. A list of the legal research contracts is provided in Appendix 2.

The objective of this Research Report is to supplement the overall Commission findings and recommendations contained in Volume I. Inevitably, there is some duplication in coverage, but every attempt has been made to keep this to a minimum. The report interprets the word "research" broadly and covers work carried out by Commission staff, contract research on transport economics and transport law, and information obtained through the consultation process. The Table of Contents gives a detailed listing of the ground covered, but it is useful to review this briefly in the present introductory chapter.

Chapter 2 addresses the role of transport in the Canadian economy and the overall reactions of shippers, travellers and carriers to the regulatory changes.

The individual transport modes are addressed in Chapters 3-7. These relate respectively to transport in the highway, air, rail and marine modes, together with a chapter on intermodal transport. These chapters are summaries of more detailed examinations of each mode conducted by Commission staff, and these lengthy reports,

together with all contract research, will be forwarded to Transport Canada with the Commission's records. The general approach in each chapter is to examine the legislative changes affecting the mode, developments in the decade 1981-91 and current problems.

The final chapters of this volume address issues which are not modal specific. Chapter 8 deals with transport subsidies; transport and regional development; and employment and management-labour relations in transport. Chapter 9 considers transport safety; transport and the environment; and transportation accessibility for persons with disabilities. Chapter 10 discusses legal studies, relating to broad areas, such as public interest investigations and transport specific competition rules, and specific structural problems in transport, such as air route allocation and rail line abandonment.

2

Transportation Background

This chapter discusses the role and importance of transport in the Canadian economy. The overall reactions of shippers and travellers are described with respect to the changed transportation environment since 1987. The chapter concludes with a brief summary.

TRANSPORT IN THE CANADIAN ECONOMY

This section examines the role and importance of transport in the Canadian economy in terms of transport's contribution to the Canadian Gross Domestic Product (GDP); the shares of passengers and freight carried by the various modes; and the employment generated. Unless indicated to the contrary, all figures relate only to the activities of Canadian domiciled carriers. They exclude the transborder activities of U.S. trucking companies, railroads and marine carriers; the international air activities of foreign carriers serving Canada; and overseas marine activities, where Canada does not have a merchant fleet.

Transport Share of GDP

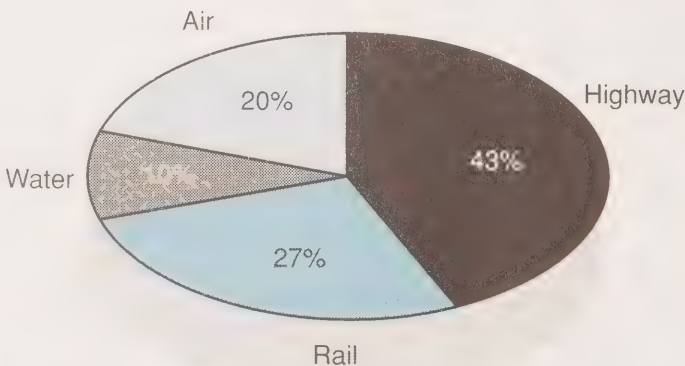
The Royal Commission on National Passenger Transportation has stated that in 1989 Canadians spent 16% of GDP on transportation.¹ This is based on a very wide definition of transport and covers the revenues received by all Canadian commercial transport carriers together with the estimated expenditures of Canadians on their private automobiles. However, a more narrow definition of transport has been the focus of the work of the NTARC, which did not include any extensive examination of the role of the private automobile. The revenues of commercial transport carriers are discussed later in this chapter, and the figures for 1990 are consistent with those used by the Royal Commission for earlier years.

This section examines the value added by the commercial transport carriers. This is a very common economic concept and shows the value of the sales of commercial carriers less the cost of the inputs they used, such as fuel and equipment. The measure is therefore the net contribution of the transport industries at factor cost to the Canadian GDP. The definition of transport comprises the highway, air, rail and marine modes, urban transit and a number of miscellaneous transport services. It does not include non-commercial transport, where the private automobile is the most important component, followed by private trucking in the carriage of freight. This definition can therefore be

regarded as "bare bones." In 1991, the value added by the transport industries was equivalent to 4.0% of the Canadian GDP.

Revisions in statistical series and fluctuations in economic activity from year to year complicate analysis of transport's share of economic activity over the longer term, but it would seem that this share is in slight decline. As the standard of living in an economy improves, relatively more is spent on services and less on goods. Although transport is a service, as goods become a relatively smaller part of economic activity, the demand for freight transport declines in relative terms. Moreover, sophisticated manufactured goods, with a higher ratio of value to weight, require less transport services in relation to value. Increased demand for passenger transport, as incomes rise, has not been sufficient to offset the freight transport decline. In addition, productivity gains in the transport industries have been substantially higher than in the economy as a whole, and this has reduced the resources needed by the transport industries and consequently tended to reduce their share of GDP.

Figure 2.1
Transport Carriers % Contribution to GDP, 1990/91



SOURCE: Statistics Canada.

The transport component of GDP consists mainly of the transport services provided by carriers in the air, highway, rail and water modes, and these account for over 70% of transport's contribution to GDP. The balance of some 30% of transport

production is attributable to a variety of transport services, ranging from urban transit to taxis to travel agents, together with some government activities, such as the maintenance of airports and ports.

Figure 2.1 shows the contribution to GDP provided by the carriers and is compiled from the National Accounts (SC 15-001). The figures have been averaged for the years 1990 and 1991, as it would have been misleading to have shown 1991 alone because the recession was particularly hard on the air industry in that year. Highway transport is the most important mode in its contribution to GDP; this is due to the trucking industry, as interurban bus services are relatively modest in this context. The rail industry is in second place, followed by air. Water transport is relatively less important.

Modal Shares of the Transport Markets

The operating revenues of carriers in the four transport modes totalled \$32.2 billion in 1990 (sources: Air SC 51-206; Rail SC 52-216; Trucking SC 53-222; Intercity Bus SC 53-215; and Water SC 54-205). Operating revenues for the air and rail modes are as earned by the carriers. Highway operating revenues include for-hire trucking and intercity buses, together with an estimate of the operating expenses for private trucking, as a revenue figure would not be meaningful here.² The water figure relates to expenditures rather than revenues of water carriers because revenues are not reported for all private water carriage, and the government operates its water carrier operations at a large loss.

In terms of operating revenues, the highway mode is the most important, followed by air and rail. Water is considerably behind the other three modes; this is partly because Canada does not have a merchant fleet engaged in overseas trade, and the carrier revenues from overseas trade are almost entirely earned by foreign-based companies.

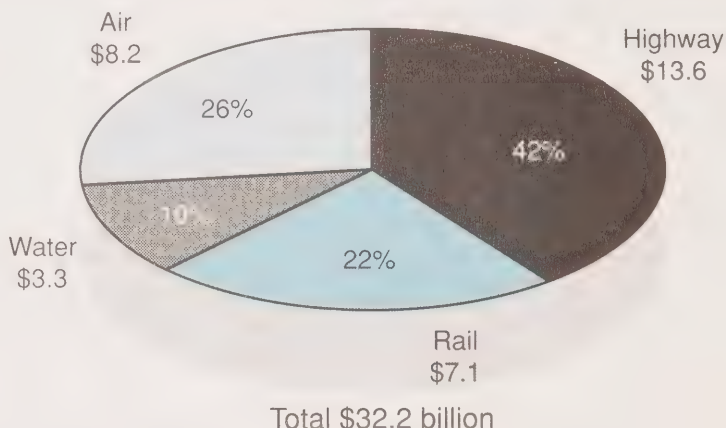
The percentage distribution in Figure 2.2 does not differ substantially from Figure 2.1. However, a mode could feature more strongly in Figure 2.2, relating to revenues, than in Figure 2.1, relating to value added, if the mode were a very heavy purchaser of outside materials and services. There is some evidence that this tends to be true of the air transport mode compared with highway and rail.

Of the four transport modes, only the air mode is predominantly dependent upon passengers, with these contributing 89% of operating revenues from the carriage of passengers and goods in 1990. In the rail mode, passenger traffic provided less than 9% of operating revenues, and more than two-thirds of this figure consisted of the government subsidy to VIA Rail. Intercity bus services provided only 2.5% of the operating income of highway carriers and even this figure included some carriage of freight by bus. For reasons already explained, operating expenses were used for water transport rather than operating revenues and passenger ferry services contributed about

6% of this total. Overall, passenger transport provided 26% of the operating revenues of the four transport modes, with five-sixths of this revenue from the air mode.

Figure 2.2
Operating Revenues of Transport Carriers, 1990

\$ Billion and % Share



SOURCE: Statistics Canada.

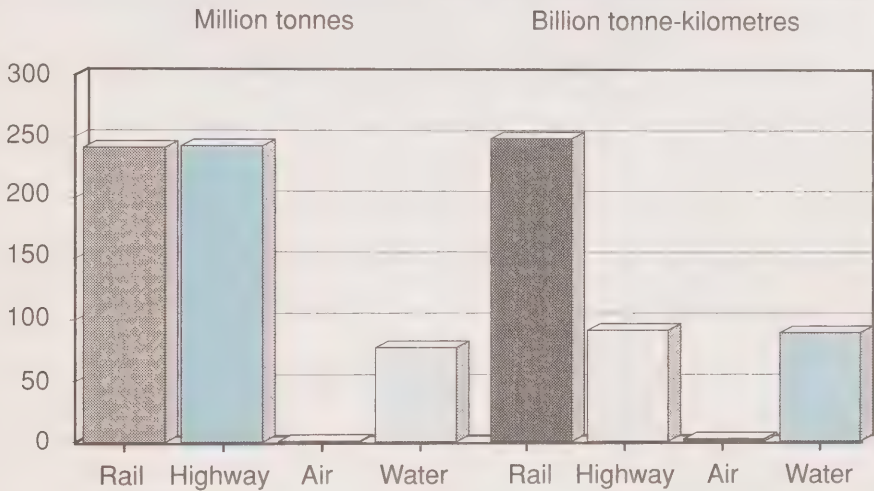
Figure 2.3 shows transport of freight by Canadian carriers for all modes, using the same statistical sources as cited for Figure 2.2.³

For-hire and private trucks operating in intercity transport carry roughly the same tonnage as the Canadian railways, according to the statistics shown in Figure 2.3. However, statistical coverage for the trucking mode is considerably less complete than for rail, with this particularly marked in private carriage where the survey does not cover carriers with less than fifteen trucks. In reality, the tonnage of freight transported by truck must exceed that transported by rail by quite a substantial margin. Turning to tonne-kilometres, the railway is the most important mode because the average length of haul is much higher than in the trucking industry.

Over the range of commodities where rail and truck are competitive, rail tends to be the stronger mode for long distance shipments while truck is dominant on shorter hauls. However, the commodities transported by rail in Canada are predominantly primary products — grain, metallic ores, forest products, coal, fertilizer and

construction materials — and these are transported at freight rates far lower than those applying to high-valued manufactured products, moved predominantly by truck. Thus, highway operating revenues in Figure 2.2 were much higher than railway operating revenues, even though the railway generates a far greater output in terms of tonne-kilometres.

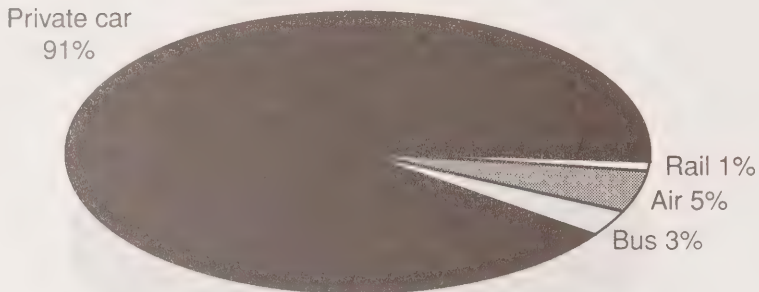
Figure 2.3
Modal Transport of Freight, 1990



SOURCE: Statistics Canada.

In 1990, the movement of domestic marine cargo within Canada was 60 million tonnes, while 76 million tonnes of cargo were loaded or unloaded on international movements between Canada and the United States and 156 million tonnes in overseas shipping. These three figures total a very substantial 292 million tonnes. Water transport is of immense importance to the overall Canadian economy, despite its modest ranking in terms of the activities of Canadian domiciled carriers. Canadian ships operate only in the domestic and Canada-U.S. markets, as Canada does not have a deep-sea merchant marine. The tonnage of freight moved by air is almost insignificant compared with the surface modes, but the average length of haul is considerably higher than for the other modes.

Figure 2.4
Modal Shares of Passenger Trips, 1990



Total Trips: 266 million

SOURCE: Royal Commission on National Passenger Transportation

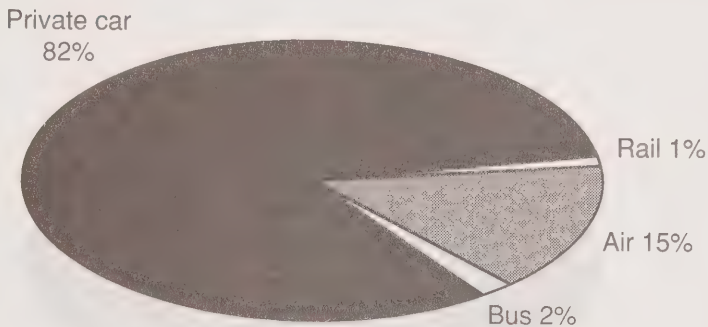
Figure 2.4 shows modal shares of passenger trips in 1990. This is based on material presented by the Royal Commission on National Passenger Transportation.⁴ The data relate only to intercity transport and exclude all commuter travel.

Although it is always a very difficult task to calculate the number of trips made by private automobile, there is no question as to the overwhelming predominance of this transport mode for passengers. Air is the most important of the commercial transport modes, followed by bus and rail, but all three modes together account for only 9% of passenger trips.

The Royal Commission also produced estimates of passenger-kilometres performed in the various modes and these are given for 1990 in Figure 2.5 below.

Journey length was much higher by air than by any other mode and some 15% of total passenger-kilometres were performed by air. The bus and rail shares of passenger-kilometres were still insubstantial. Even though distance travelled on the average car trip was lower than by all other modes, the passenger car still accounted for over four-fifths of passenger-kilometres. This dominant position of the private car in passenger transport has been examined at length by the Royal Commission and is only relevant tangentially to the mandate of the NTARC.

Figure 2.5
Modal Shares of Passenger-kilometres, 1990



Total Passenger-kilometres: 166 billion

SOURCE: Royal Commission on National Passenger Transportation

Employment in Transport

In April/June 1992, the transport service industries provided 4.2% of total Canadian industrial employment.⁵ Over the long term, the transport share of total employment appears to have declined, paralleling the experience relating to the transport share of GDP, but changes in statistical methodology make it impossible to trace this decline accurately over time.

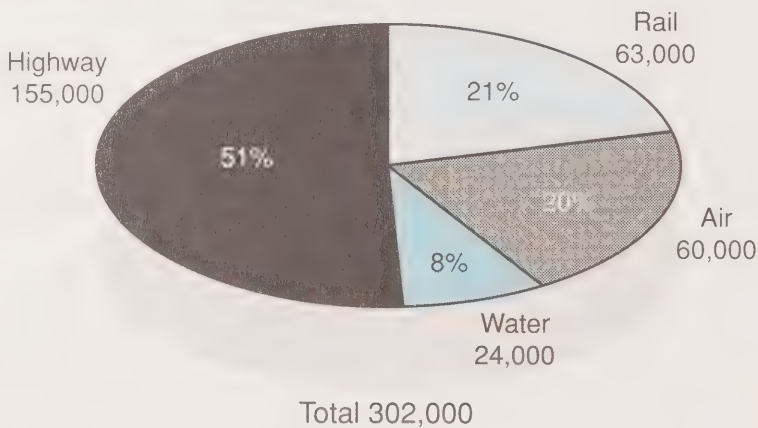
In April/June 1992, the transport industries provided 423,000 jobs in Canada. Of this employment, some 157,000 jobs were in activities that do not form an integral part of the present review — urban transit, highway and bridge maintenance, taxis, pipelines, travel agencies, parking lot operations, school buses and a number of other miscellaneous services.⁶ In addition to the 114,000 jobs in trucking, highway includes 5,000 jobs in intercity buses and an estimate of 36,000 owner-operators. These owner-operators are financially dependent upon the trucking industry, although not technically counted as employees. (This estimate of the number of owner-operators is only approximate, as the statistics on this employment are decidedly fragile.)

Highway transport employs more Canadians than the air, rail and water modes together, as shown in Figure 2.6. The highway share of employment is appreciably higher

than its shares of value added and of operating revenues in Figures 2.1 and 2.2. The highway transport carrier is less capital intensive than carriers in the other modes, despite the considerable investment necessary to purchase highway rigs. As discussed in more detail in Chapter 5, railway employment is declining rapidly. Air employment is very close to rail, but this is also falling at present. Water is quantitatively less important than the other transport modes.

Figure 2.6
Modal Employment April/June 1992

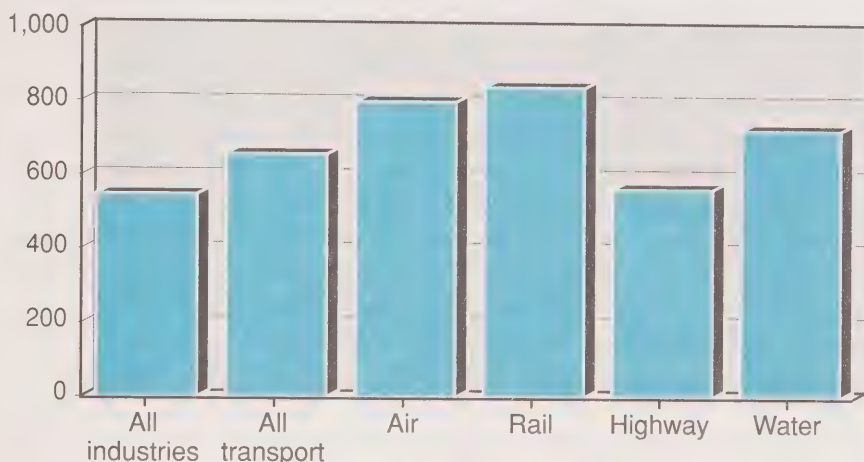
Number and % share



SOURCE: Statistics Canada.

Average weekly earnings are shown in Figure 2.7 for April/June 1992; they are higher in the transport industries than in the aggregate of Canadian industrial employment. These high earnings are found in all modes except for trucking. However, the transport employment which is not a direct part of the NTARC work tends to be less well-paid, with the exception of pipelines and urban transit.

Figure 2.7
Average Weekly Earnings (\$), April/June 1992



SOURCE: Statistics Canada.

REACTIONS OF SHIPPERS

The 1987 transport legislation recognized the need to free carriers from excessive government interference and to allow them to operate in an economic and efficient manner. Nevertheless, regulatory reform moved the carriers from their place of central concern in government transport policy to a secondary role which stresses their function as serving the needs of shippers and travellers. In this section, we address the reactions of shippers to the changes which resulted from the 1987 legislation. The reactions of carriers are not examined, but are addressed in the modal chapters which follow. As a general statement, transport carriers have welcomed the 1987 deregulation as increasing commercial freedom and reducing government intervention. However, the financial performance of the carriers has been unimpressive and the modal chapters address the causes of this in terms of the current economic recession, transport deregulation and other factors, which are often more fundamental.

General Reactions

Shippers' reactions to the 1987 legislation have been obtained from three primary sources — submissions to the Commission and the ensuing consultations, surveys conducted by the National Transportation Agency and reported in their Annual Reviews, and research contracted by the Commission to Peat Marwick Stevenson & Kellogg (PMS&K).

As an overall statement, shipper reaction to the legislation has been favourable. Testament to this is the fact that shipper requests for modification to the legislation consist primarily of fine tuning existing provisions or identifying areas where it is claimed that reforms have not gone far enough. There have been no recommendations for reversion to the former regulatory regimes with respect to any of the modes of freight transportation. While the degree of shipper satisfaction varies among modes, this is likely a reflection of variations in the significance of changes in each mode, and their relative importance to shipper groups and to individual shippers.

One of the difficulties in measuring the effect of changes is inherent in the deregulated environment which has been created. Whereas prior to 1988 carrier rates were in most cases publicly recorded, they are now in a majority of situations a private matter between shipper and carrier. This makes comparisons of rates before and after deregulation impossible on a quantitative basis and results in the need to rely heavily on shipper perceptions reported through surveys. Assessments of changes respecting competition and service levels must depend on similar data sources.

In addition, several shipper sources have indicated that trading patterns have changed since 1987, resulting in increasing north/south transportation demand between Canada and the U.S. and reduced transcontinental movement. While this may complicate statistical comparisons, several Canadian producers have reported that transportation deregulation has facilitated their ability to respond to new trading opportunities.

Shippers' overall satisfaction is confirmed by submissions directed to the Commission. The following quotations are typical of those received from shipper organizations and individual shippers.

Today, as in 1987, the Canadian Manufacturers' Association is convinced that the package of regulatory reform, referred to as "Freedom to Move", was, and will continue to be, the right policy. It has contributed to lower transportation costs of goods for domestic and international markets, enhanced the competitiveness of Canadian manufacturers and contributed to the overall health of the economy.

(Canadian Manufacturers' Association, p.3)

From our point of view as chemical shippers, the legislation has permitted competition and market forces to provide a wider range of transportation services at competitive prices.

(Canadian Chemical Producers' Association, p.2)

Canadian Industrial Transportation League members have fared well as a consequence of the transportation reforms introduced in 1987.... We wholeheartedly support it and we wish, in many instances, to retain it in its current form.

(Canadian Industrial Transportation League, p.3)

The Canadian Pulp and Paper Association strongly supports the competitive initiatives incorporated in the National Transportation Act.
(Canadian Pulp and Paper Association, p.1)

Shippers in the Atlantic Provinces have generally benefitted from the increased freedom of carriers to respond to the market. Shippers have seen greatly increased competition for their traffic in terms of both services offered and price.

(Atlantic Provinces Transportation Commission, p.2)

This high degree of support notwithstanding, PMS&K comment as a result of their survey work and interviews with a broad cross section of shippers:

While shippers generally applaud the changes made to the NTA in 1987, many feel that a number of improvements are still required to the Canadian legislation, so that carriers can meet their needs more efficiently and effectively.

(PMS&K, p.ES-7)

The findings of two shipper surveys are now reviewed on a modal basis. The National Transportation Agency (NTA) has surveyed shippers as part of each of its Annual Reviews since 1988. It surveyed 3,239 shippers in 1991 and received 646 usable responses (20%). PMS&K, in the survey for the Commission, distributed surveys to 794 shippers and received 207 usable responses (26%). Both surveys excluded grain shippers, as grain transportation is regulated under the *Western Grain Transportation Act*, with freight rates heavily subsidized by government.

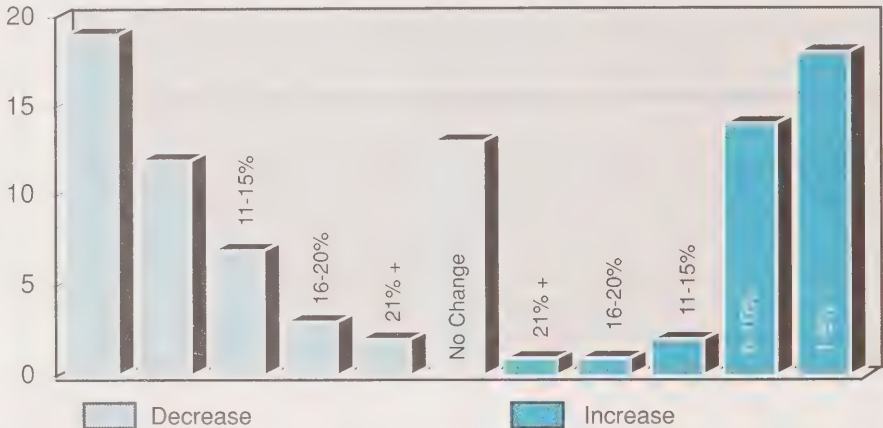
Highway Carriers

Shippers have generally been satisfied with the level and quality of available trucking services since entry controls were relaxed in 1988.

(NTA Annual Review 1991, p.115)

The above quotation is firmly founded on responses to the Agency survey and was confirmed in the research conducted for the Commission. In the PMS&K survey, respondents spent half their freight expenditures on trucking services and indicated specific beneficial experience during the past four years.

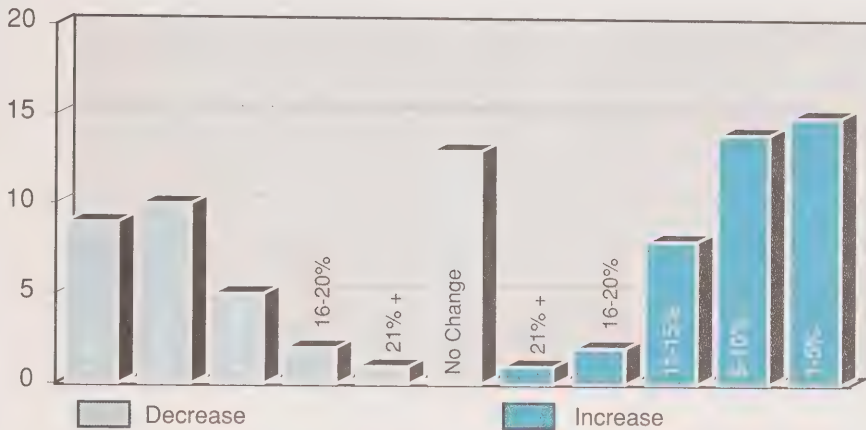
As can be noted from Figures 2.8 and 2.9, shippers have experienced relative stability in freight rates since 1987. This assessment was in current terms and did not allow for the effects of inflation. The Canadian Consumer Price Index rose 21% between 1987 and 1991, so that virtually no-one experienced a rise in real freight rates.

Figure 2.8**Truckload Movements: % change in rates mid-1988 to mid-1992**

SOURCE: Peat Marwick Stevenson & Kellogg.

Shippers attribute the relative stability of freight rates to their stronger negotiating position resulting from: general economic conditions (59%), increased competition among Canadian carriers (52%), U.S. carrier competition (46%), and competing modes (39%). In terms of service levels, three quarters of large shippers reported that service improved over the four year period and almost half of small shippers identified similar experience (PMS&K, page 49).

Despite the general level of satisfaction identified by shippers, both in submissions and in responding to PMS&K, several factors still inhibit efficient "seamless" coast to coast transportation. Over 45% of respondents identify factors under provincial government control affecting truck transportation. The issues raised are consistent with those discussed during Commission consultations and can be characterized generally as a lack of harmonization in trucking industry regulation among jurisdictions. Key items are the residual economic entry controls practised in some provinces and the lack of uniformity of weight and dimension regulations, hours of service, and enforcement of safety provisions. Shippers express a desire for greater federal leadership and/or a more direct federal role in uniform regulation of safety and standards.

Figure 2.9**LTL Truck Movements: % change in rates mid-1988 to mid-1992**

SOURCE: Peat Marwick Stevenson & Kellogg.

Rail Carriers

Shippers have registered similar satisfaction with respect to the changes introduced by the 1987 legislation respecting rail transportation as evidenced by the following, typical quotation from an industry submission to the NTARC.

Canadian Fertilizer Institute members believe that the NTA has provided some needed competitive stimulus to the rail sector in Canada. That stimulus has allowed shippers to maintain and expand markets in North America and offshore in a highly competitive global environment.

(Canadian Fertilizer Institute, p.4)

Confidential contracts have proved to be a very popular feature of the regulatory reforms and are reported in almost all industry segments. The use of contracts and the proportion of traffic moving under them has continued to increase since they were permitted under the *NTA, 1987*. As reported by the Agency:

Overall, some 64 per cent of rail users who responded to the Agency's survey of shippers reported having a contract.

(NTA Annual Review 1991, p.82)

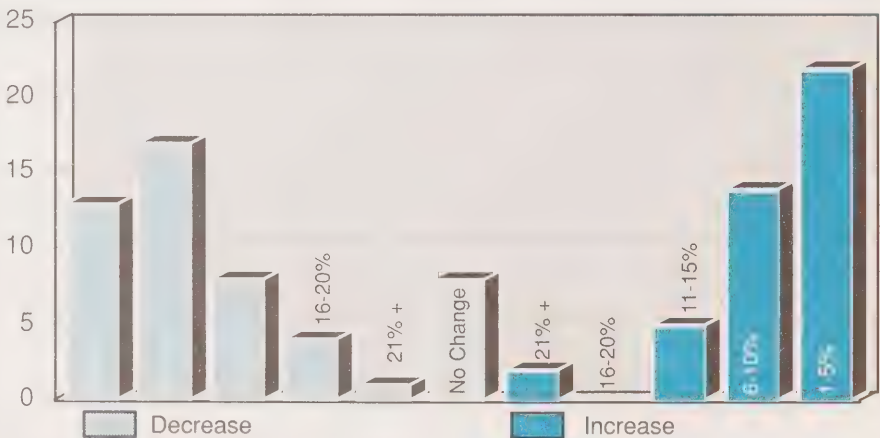
Among the shippers with confidential contracts, respondents reported that, on average, 70 per cent of their companies' traffic shipped on Canadian railways moved under confidential contracts in 1991.

(NTA Annual Review 1991, pp.82-3)

Experience with respect to rail transportation costs is represented in Figure 2.10. Over half of the respondents to the PMS&K survey reported that rates had not changed or had declined since 1987. Furthermore, 73% have not experienced increases above 5%. These responses are in current terms; as inflation in the Canadian economy raised prices 21% between 1987 and 1991, virtually all rail rates had declined in real terms.

Figure 2.10

Rail Movements: % change in rates mid-1988 to mid-1992



SOURCE: Peat Marwick Stevenson & Kellogg.

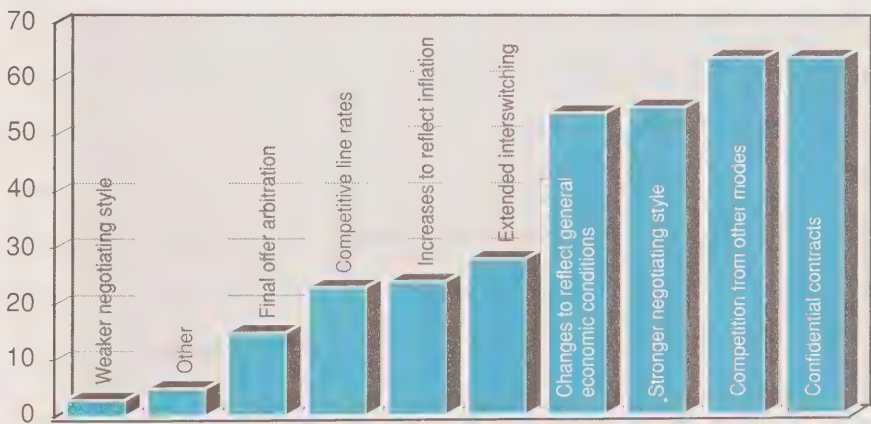
Shippers' perceptions of the factors which influenced rail rates are set out in Figure 2.11. In addition to the effects attributed to specific provisions of the legislation it is interesting to note the importance attributed to modal competition equals that of confidential contracting.

Extended interswitching has been another major factor of the legislation influencing competitive behaviour. Responses to the Agency survey indicate that 50% of respondents' facilities are within switching limits, of a competing carrier. With respect to

competitive forces for shippers beyond switching limits it is instructive to note that 38% of respondents to the PMS&K survey consider competitive line rates and final offer arbitration to be important factors, regardless of the fact that minimal use has been made of these provisions. This confirms the view, reported by the Agency and expressed by shipper representatives during consultations with the NTARC, that competitive line rates are seen by shippers as a useful bargaining tool.

Regarding service, a majority of respondents to the PMS&K survey reported that rail service had improved over the past four years. Respondents to the Agency survey were more sparing in their positive evaluation; 36% indicated improved service from the preceding year.

Figure 2.11
Importance of Factors in Changes to Rail Rates (past four years)



SOURCE: Peat Marwick Stevenson & Kellogg.

With respect to improving the current regime, respondents to the PMS&K survey identified the need to allow the railways greater flexibility in managing their costs, noting in particular that abandonments should be accelerated and that the creation of short lines should be encouraged and supported. In addition, shippers believe that the minimum compensatory rate provisions should be abandoned. In survey responses and in submissions and consultations, shippers and shipper groups are unanimous that competitive access provisions be maintained. The absence of such provisions, with

respect to traffic originating on provincially regulated railways, was noted in several submissions and consultations, particularly regarding the British Columbia Railway.

Marine Carriers

The shipper reaction to the *Shipping Conferences Exemption Act (SCEA)* provisions has been more limited and less unanimous. Fewer shippers employ the marine mode than highway and rail carrier services and among those that do, an understanding of the legislation, its objectives and consequences is far from universal.

Responses to the PMS&K survey were offered by only three quarters of those using marine services. About 40% experienced no change in services over the past four years. Of those who considered that there had been change in level of service and ability to secure space for their cargoes, slightly more considered that the change was negative rather than positive. There was an even stronger negative reaction to changes in the ancillary charges of conferences serving Canada. (PMS&K, p.44)

The views of shippers were obtained on the expected results of eliminating *SCEA*. Again less than three-quarters of those using marine services responded and 40 to 50% of respondents were unsure or expected no change to result if the Act were eliminated. However, appreciably more shippers expected a positive impact than a negative impact from an abolition of *SCEA*. (PMS&K, p.43)

Perhaps the most cogent commentary from various shipper submissions and consultations was the suggestion that *SCEA* be amended to allow conferences to negotiate inland rates with carriers.

Air Freight

There was little shipper reaction regarding air freight services. In response to the Agency survey most shippers reported little or no change. In responding to the PMS&K survey, approximately one third indicated improvement in cargo tracing and service, one third indicated no change, and a third indicated a deterioration or failed to respond.

Shipper submissions did not dwell extensively on air freight matters. Some provincial government submissions have indicated service deterioration in smaller communities, no longer receiving jet service, where the lower capacity of smaller aircraft cannot always meet shipper needs. There can also be problems in air charters, where two or more shippers may not be allowed to charter an aircraft for their joint use.

REACTIONS OF TRAVELLERS

The 1987 legislation did not affect passenger transport by rail and highway, so that the reactions of travellers are confined to the air mode. Much more extensive analysis of passenger transport is, of course, contained in the report of the Royal Commission on National Passenger Transportation and there was no need to duplicate this in the work of the NTARC. The reactions of air passengers are addressed under three headings — services, fares and traveller attitudes. As explained in greater detail in Chapter 4, the

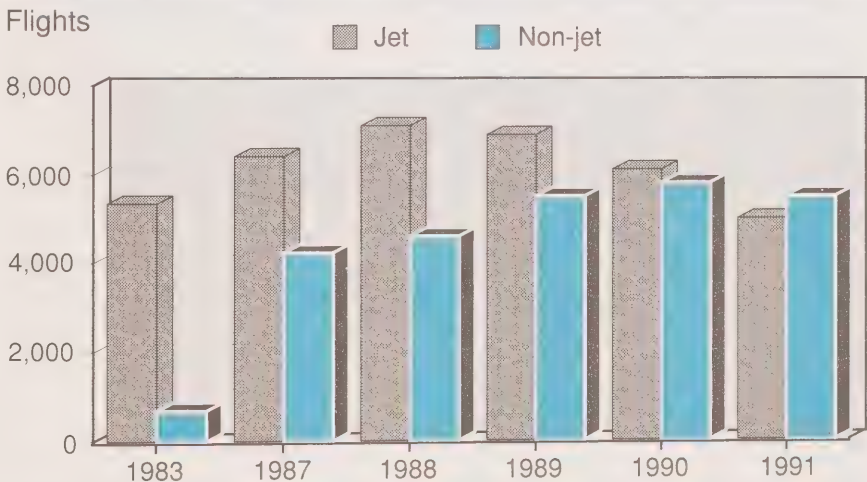
deregulation of air services in southern Canada effectively took place in May 1984 and consequently it is necessary to make all comparisons for the air mode on a basis further back in time than the *NTA, 1987*.

Level of Service

The deregulation of air transport has increased the level of service provided by Canada's airlines. This is illustrated in Figure 2.12, provided to the Commission during a presentation by Agency staff.

The total number of flights increased from 1983 to 1989, although the number fell in 1991, when there was a substantial decrease in overall air traffic. The increase in the number of flights was predominantly in non-jet aircraft and reflects the development of hub and spoke operations by airlines, where service between hubs is provided by jet aircraft and non-jet aircraft provide service between smaller cities and the major hubs.

Figure 2.12
Canadian Domestic Jet and Non-Jet Flights per Week
(155 City Pairs)



SOURCE: National Transportation Agency.

The findings in Figure 2.12 are confirmed by data compiled for the NTARC on the frequency and seating capacity offered by Air Canada and Canadian Airlines International for the top 35 city pairs in Canada. The number of flights per week provided between these city pairs in 1991 was 64% greater than was provided by Air

Canada and the predecessor airlines to Canadian Airlines International in 1983. The seating capacity on these flights in 1991 was 24% greater than in 1983.⁷

In 1983, Air Canada was dominant on the Canadian air scene. Although there was some degree of competition between virtually all major city pairs, in many markets Air Canada offered a disproportionately large share of total capacity. By 1991, Canada had a duopoly offering remarkably similar services with schedules that were almost indistinguishable. This is well illustrated in Figure 2.13:⁸

Figure 2.13
Non-Stop Frequencies on Selected Domestic City-Pairs,
Weekdays, Summer 1992

City-Pairs	Air Canada	Canadian
Toronto-Calgary	7	6
Ottawa-Calgary	2	2
Toronto-Vancouver	8	7
Montreal-Halifax	4	4
Montreal-Toronto	20	16
Edmonton-Vancouver	6	6
Halifax-St. John's	6	5
Montreal-Edmonton	0	0

SOURCE: Sypher

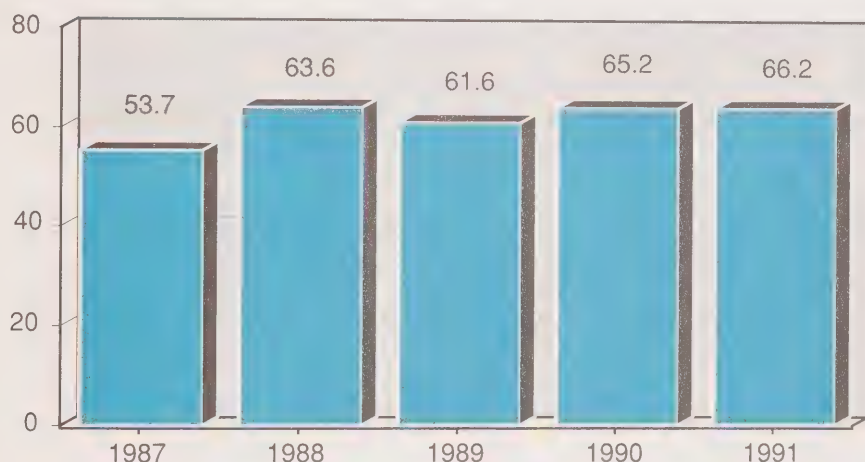
Major city pairs in Canada have enjoyed increased service since the de facto deregulation of 1984. This increased service is generally provided by a duopoly, with the additional competition of charter operators serving city pairs which generate high traffic. The criticism has been advanced that the service improvements have been blunted by competitors having identical departure times on several routes. Nevertheless, this duopoly is an improvement on the situation before deregulation, when one carrier was often dominant even on routes where there was ostensibly competition.

Improved service has not been confined to major cities. The NTA staff presentation to the Commission also showed improved service to northern Canada in terms of numbers of flights and numbers of available seats. The improvement was continuous until the large decline in Canadian air traffic which occurred in 1991. Contract research for the NTARC looked at ten smaller cities in the south: "every one of these cities has higher frequencies now than they did in 1984."⁹ Although some cities no longer have jet service, it appears that only one city has lost service completely — Brandon, Manitoba.

Air Fares

An important development of the competitive era in air transport over the last few years has been the widespread use of discount fares. Figure 2.14 is compiled from Appendix 9.5 of the NTA Staff Report to the NTARC entitled *Air Services*, dated May 1992.¹⁰ The data refer to all domestic air services of Canadian Level I carriers in the second quarter of each year.

Figure 2.14
Number of Discount Fare Tickets as % of Total Tickets



SOURCE: National Transportation Agency.

In 1991, 66% of passengers carried on domestic scheduled air services by Canadian Level I carriers travelled on some form of discount ticket. Although not shown in Figure 2.14, the major rise in the usage of discount fares occurred between 1983 and 1987. The extent of utilization of discount fares seems to have stabilized since 1988. From supplementary information provided by Statistics Canada for the whole year 1990 (SC 51-206), discount passengers were much higher in southern domestic services (64%) than in northern services (48%). (The discount share of traffic for the year 1990 was 64%, marginally less than the 65% for the second quarter shown in Figure 2.14. The southern traffic is so much larger than the northern that southern traffic virtually determines the overall discount usage for Canada as a whole.)

Information on the dollar amount of the average discount given in a discount fare is less readily available. Figure 2.15 is compiled on the basis of data in Appendix 3.5 of the NTA Staff Report to the NTARC entitled *An Integrated and Competitive Transportation System*, dated March 1992. The data are again for the second quarter of each year, but relate only to discount fares offered on the top 25 city pairs in Canada. Again, it is not possible to extend this chart earlier than 1987.

Figure 2.15
Discount Fare Reduction as % of Regular Economy



SOURCE: National Transportation Agency.

The average discount given was equivalent to 30% of the standard economy fare in 1991 and has fallen since the peak level achieved in 1987 and 1988.

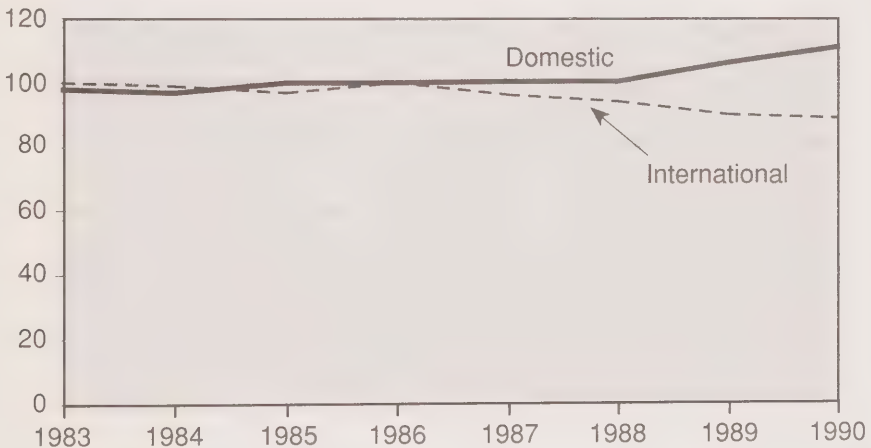
Statistics Canada compiles an index of air fares for Canadian Level I scheduled air carriers (SC 51-206) and this index can be converted into real terms by using the Consumer Price Index (SC 62-010) as a deflator. Indexes of air fares are calculated separately for standard economy fares and discount fares and then combined by Statistics Canada to give an overall index. The weights in the indexes for these overall fares are changed each year to reflect changes in the relative importance of discount as against standard fares; however, from the data presented in Figure 2.14, this has not presented much of a statistical problem in recent years. Figure 2.16 below shows the index for all

fares expressed in real terms, with 1986 = 100; the international index includes transborder services.¹¹

Domestic air fares in Canada showed a slight increase in real terms between 1983 and 1988. Standard economy fares were rising appreciably, but this was offset by lower discount fares and an increased use of these fares. Since 1988, the fare index has risen steeply in real terms — by some 11% in excess of the rate of inflation. This rise has affected both economy and discount fares to roughly the same extent. Although a fare index is not yet available for 1991, the increase has almost certainly continued in that year.¹² Domestic fares in northern Canada have increased less than those in the south; based on indexes of 1986 = 100, the northern index was at 106.1 in 1990 against a southern index of 111.6.

Figure 2.16
Air Fare Index: Real Terms, 1986 = 100

Canadian Level One Scheduled Carriers



SOURCE: Statistics Canada.

The international fare index shows a pattern considerably different from that of the domestic index. The international index was still falling in 1990, although results for 1991 will probably show an upturn in this index.

To summarize this discussion on air fares, discount fares now account for 66% of Canadian domestic ticket sales and the discount averages some 30% off the standard economy fare. However, utilization of discount fares has only increased marginally since

1988, while the extent of the discount has declined slightly. Deregulation has not seen any decrease in real terms in domestic air fares; both economy and discount fares increased appreciably in real terms between 1988 and 1990, with this increase probably continuing into 1991. On the other hand, international fares have fallen considerably in real terms.

Traveller Surveys

Each year, the Agency conducts an air transport survey among members of Commercial Travellers' Associations.¹³ In 1991, 3,748 persons were surveyed and 989 usable returns were obtained. This survey does not cover all business travellers, but it is representative of sales professionals across the country. The reactions of these sales professionals to the deregulation of the Canadian airline industry were not overly positive: 22% of the respondents felt that deregulation had been beneficial, 32% felt that it had not, while 46% held no opinion. Of those who felt deregulation had been successful, the main benefit was a decrease in fares. Critics of deregulation felt that fares had increased and that overall service had deteriorated.

The Agency also polled 2,154 members of the Alliance of Canadian Travel Associations, obtaining 552 usable responses. When questioned on the effectiveness of deregulation with respect to the needs of travellers, 48% of the respondents felt that deregulation had not responded to travellers' needs, 22% felt that it had, and 30% held no opinion. When deregulation was considered beneficial, lower fares were cited as the prime benefit. The main drawbacks of deregulation were an increased number of airline bankruptcies and mergers, increased air fares and decreased service to more remote areas.

The Agency has not surveyed non-business travellers and no work was done in this area by the Royal Commission on National Passenger Transportation. The NTARC therefore, commissioned a short survey with the Angus Reid group and the questions appeared on this company's National Poll in August 1992. The questionnaire was confined to respondents who had made at least one non-business trip by air within the last two years and 48% of those interviewed qualified on this criterion. Of these non-business travellers, 56% said they always made an advance booking and a further 23% said that they did so usually or occasionally. Of those making advance bookings, the estimate of the price savings on the discount fare averaged about 32%. These findings are all consistent with the data presented on discount fares earlier in this chapter.

The main objective of the survey was to measure changes in the attitudes of non-business travellers to the quality of air service since deregulation. It was not an easy task to frame relevant questions and it was recognized that respondent memories of conditions nearly a decade ago would not be completely reliable. Respondents were asked to think about air travel today compared with the way it was in 1983, before discount fares were widely available.¹⁴ They were asked to rate the general quality of air service today compared with that in 1983, but explicitly asked to exclude the air fare

itself from their consideration. On balance, the non-business travellers found no change in the quality of service: 23% thought it was better and 20% thought it was worse, with the remainder indicating no change or no opinion. A second question asked respondents to compare air travel today with what it was in 1983, rating all aspects of service including the discount fares that are now available. The response was more positive: 35% of respondents rated air travel as better today against only 13% who rated it as worse, with the remainder again in the no change and no opinion response categories.

To summarize these traveller surveys, business travellers felt that the quality of air service had deteriorated but non-business travellers were more positive on the changes since the de facto deregulation of 1984. These findings are consistent with the statistical data presented earlier in this sub-section.

SUMMARY

1. The transport industries' share of Canadian Gross Domestic Product is declining slightly over the years. This is because greater demand for air travel has not been sufficient to offset a demand for freight transport increasing less rapidly than total Canadian Gross Domestic Product.
2. In terms of operating revenues and employment, the highway mode is the most important in Canada. Air is the second largest mode in terms of operating revenues, followed by rail; in terms of employment, rail is ahead of air. Marine transport carried out by Canadian domiciled carriers is considerably less important, reflecting the fact that Canada has no international deep-sea fleet.
3. In terms of tonnage carried, highway transport is the most important mode, although this is not fully reflected in the official statistics mainly because of the under-reporting of private carriage. However, in terms of tonne-kilometres of work performed, railway transport is far ahead of trucking because the railway industry concentrates on the carriage of bulk commodities over long distances. In passenger transport, the private car is predominant in Canada, with air the most important of the commercial transport modes.
4. Average weekly earnings in the transport industries are appreciably higher than in the economy as a whole and this is true of all major transport modes except trucking.
5. Shipper reaction to the changes since the 1987 legislation has been very positive. Freight rates have fallen in real terms both for highway and rail transport, while quality of service has improved. The competitive access provisions for rail transport have been particularly welcome. Marine and air freight are used less than the

surface modes. There was therefore, less shipper reaction here, although there were some adverse comments on international marine transport.

6. The quantity of air services provided in Canada has increased since deregulation. International air fares have fallen in real terms, but domestic air fares have not been reduced as a result of deregulation. In particular, domestic air fares have risen sharply in real terms since 1988. Business travellers have somewhat negative reactions to the changes in air services following deregulation, but non-business travellers are more positive, appreciating the advantages of low discount fares.

NOTES

- 1 *Directions: The Final Report of the Royal Commission on National Passenger Transportation*, Supply and Services, Ottawa, 1992, Volume 2, p.2. The Royal Commission offers the following comment on their methodology:

The concept is somewhat unconventional because it includes resources devoted to production both of transportation services that are components of final demand, and transportation services (especially freight) that are intermediate inputs used in the production of other goods and services....

If parallel estimates were made of the total resources devoted to a range of other major functions or activities in the economy — for example, to manufacturing, distribution, health care, education, public administration and so on — as well as to transportation, the total resources devoted to all these functions could well exceed [and in fact must exceed by a wide margin] the conventional measure of the total use of resources in the economy — the GDP. This is because transportation, as well as being a final product, is an input in most of the other functions including manufacturing, education and health care....The notion of total resources devoted to an economic function or activity departs from standard national income and expenditure accounts concepts....[which] avoid counting use of resources more than once when displaying data on the full range of economic activities.

(pp.2-3)

- 2 The figure for highway operating revenues is not satisfactory. Statistics Canada have not yet produced 1990 revenue figures for for-hire trucking or for private trucking operating expenses. Consequently, 1989 figures are used, including a Statistics Canada estimate of \$1.4 billion for revenues of smaller carriers not initially reported in 1989 data.
- 3 Railway freight traffic excludes interlining between carriers in order to avoid double-counting, but includes tonnage exchanged with United States rail connections. Highway tonnage includes private trucking — although 1988 figures had to be used for this segment.

as figures have not been produced for later years. Marine figures are from the Canadian Shipowners Association, *Annual Report 1991*, p.31; as they cover only Association members, they are slightly understated. Tonne-kilometres represent the work performed by the carriers and are calculated as the total tonnage carried in each mode multiplied by the average length of haul. Transport economists have long criticized the appropriateness of the tonne-kilometre measurement. For example, 20,000 tonne-kilometres could equally well consist of 100 tonnes of a commodity transported 200 kilometres or 20 tonnes of the same commodity transported 1,000 kilometres, although there would normally be much more expense involved in the first movement than in the second. Nevertheless, having relieved their consciences by criticizing the academic purity of the concept, most practitioners then proceed cheerfully to use tonne-kilometres as a measure of work performed.

4 *Directions, op. cit.*, Volume 2, p.30. This is also the source for Figure 2.5.

5 The source of all data in this subsection is SC 72-002. Total Canadian industrial employment relates to all economic activities except for agriculture, fishing and trapping, private household services, religious organizations and the military. This statistical series was subject to major revision effective April, 1992 and hence the figures quoted in the text relate to April/June 1992 and exclude the earlier months of this year. The revision increased aggregate employment by roughly 7%, but transport employment was reduced by 7%, as the category was defined more narrowly to exclude some miscellaneous transport employment. The revisions had little effect on employment figures for air, rail and water, but trucking employment was increased substantially by about 12,000 in spite of the reduced employment now assigned to the total transport group. Services incidental to air and incidental to water are included in the employment figures. However, the figures of average weekly earnings exclude these employees in incidental services. Average weekly earnings in transport also include storage, which is excluded from the employment figures, but this is too small a component to have any appreciable effect on average weekly earnings.

6 It should be noted in passing that definitions of "transport" vary between the different statistical series produced by Statistics Canada. While the NTARC work was in progress, there were also major revisions to series relating to transport employment and to for-hire trucking revenues.

7 Calculations from Sypher, *Major Canadian Airlines*, p.31. Full references to Sypher and all other economic research commissioned by the NTARC are contained in Appendix 1.

8 *ibid.*, p.29.

9 *ibid.*, p.32.

10 The data in Figures 2.14 and 2.15 incorporate subsequent minor updates provided by NTA staff in a memorandum to the NTARC dated November 18, 1992.

- 11 For a complete analysis of this index, see Studnicki-Gizbert, referenced in Appendix 1, pp.67-9.
- 12 In Chapter 4, the airline yield in terms of cents per passenger-kilometre is examined. On domestic scheduled air passenger services, this increased in real terms by 10% between 1988 and 1990, which is broadly comparable to the findings based on the Air Fare Index. The airline yield on international traffic fell 3% between 1988 and 1990, against a fall of 4.4% in the fare index. Movements in the yield index have closely paralleled movements in the fare index since 1986, but the match is not so good for the earlier years of the decade.
- 13 National Transportation Agency, *Annual Review 1991*, p.38.
- 14 It had been the intention to exclude respondents under the age of 25 from this survey on the grounds that they would have been very young in 1983 and therefore unable to make a valid comparison. Unfortunately, this was not possible, as the age breakdown of the results aggregated ages 18 to 34 in one group. However, the proportion of the sample under age 25 was too small to have been able to bias the overall results quoted in the text.

3

Highway Carrier Transport

In addressing highway carrier transport, this chapter focuses primarily on the trucking industry, the regulation of which was changed by the 1987 legislation. Regulation of the intercity bus industry was unchanged and this is addressed separately at the end of the chapter.

STATUS OF REGULATION

The *Motor Vehicle Transport Act, 1987 (MVTA)* sought to implement the competitive philosophy of the government's 1985 Freedom to Move White Paper and closely followed the Memorandum of Understanding agreed to by the Council of Ministers Responsible for Transportation and Highway Safety on February 27, 1985. Consistent with treatment recommended for other modes, its objective was to bring about intramodal competition with respect to extraprovincial trucking services. With the enactment of the *Motor Vehicle Transport Act* of 1954, the federal government had delegated its constitutional authority to regulate all the activities of extraprovincial motor carrier undertakings to the provinces. This resulted in a patchwork of regimes, most of which restricted entry into the industry based on a test of public convenience and necessity.

Earlier, in Part III of the *National Transportation Act, 1967*, the federal government provided for withdrawing the delegation of trucking industry regulation from the provinces. However, that part of the Act was never proclaimed, as the federal government decided instead to work through the Canadian Council of Motor Transport Administrators (CCMTA) to address truck transportation issues co-operatively with the provinces. To implement the reforms considered necessary in 1987, it was decided to consider the extraprovincial and intraprovincial activities of trucking companies separately.

Consequently, the *MVTA* continues the delegation of responsibility for regulating extraprovincial activities of trucking companies to the provinces but directs the manner in which entry shall be controlled. The intraprovincial activities of extraprovincial undertakings are also delegated, but the provinces may regulate these activities in the same manner as they regulate local trucking undertakings, which constitutionally are a provincial responsibility.

The intent of the legislation was to provide, ultimately, for open entry into extraprovincial trucking, with only a fitness test to screen applicants. There was to be no regulation of tariffs and tolls. For an interim period of five years, a reverse onus public

interest test was provided under which an interested party had to prove detriment to the public interest for an application to be denied. The reverse onus provision was to sunset in January 1993, leaving only the fitness test, unless the Minister, following a review and in consultation with the provinces, found it necessary to extend it.

Originally, it may have been contemplated that all provinces would provide for similar deregulation of entry with respect to intraprovincial and local trucking activity. Many did so, either soon after the federal legislation or in the following years. However, other provinces, notably Manitoba, Saskatchewan and British Columbia, have continued with restrictive entry controls and Ontario, which instituted reforms paralleling the federal initiatives, reversed direction in April 1991 and imposed a moratorium on new intraprovincial entrants for two years.

The review of the *MVTA* is provided for in section 266 of the *National Transportation Act, 1987*. Specifically, section 266(3)(g) provides for review of the adequacy and effectiveness of the legislation that pertains to trucking as it affects shippers and carriers.

EFFECTS ON CARRIERS

The effects of the *MVTA* on shippers has been dealt with in some detail in Chapter 2. This chapter deals primarily with the effect on carriers and how the application of the legislation has evolved during the past five years.

As suggested previously, some jurisdictions moved fairly quickly not only to deregulate extraprovincially but to institute parallel reforms regarding all trucking regulation. Notable among these was Quebec, which previously had one of the more restrictive regimes. Alberta, which had always been the least restrictive jurisdiction, also moved quickly to formalize the new regime. Ontario, which had been one of the earliest to initiate consultations with carriers and shippers following U.S. deregulation, moved more slowly but did implement reforms intraprovincially as well as extraprovincially.

While all provinces embraced the terms of the *MVTA*, their regulatory bodies differed in their interpretation of the reverse onus provisions. In some provinces, reverse onus challenges, from the outset, found little favour with the regulators. This was the case in Ontario and Quebec. As a consequence, the incidence of opposition to new applications dropped dramatically. In other provinces, New Brunswick and Manitoba, for example, regulators took a more restrictive interpretation and demonstrated a willingness to deny applications based on a belief that detriment to the public interest might occur.

To clarify and perhaps to encourage a more common approach, the Minister of Transport issued a Statement of Public Policy on June 1, 1989, setting out criteria to be employed in applying the reverse onus public interest test. Significant among these was the direction that the nationality of the carrier was not to be a factor in decisions. While these guidelines may have resulted in a more uniform and liberal approach, some

jurisdictions continued to be more restrictive than others in granting new extraprovincial authorities, particularly general commodity licences.

The direct effects of relaxed entry on the carriers have been increased competition for available business in all markets, accompanied by a decline in the industry's financial performance. Unfortunately, other factors which influence market competition and opportunities for financial success have also changed, as well as the legislation. During the past five years, the recession, changing trade patterns, developments in logistics management and strong competition from U.S. carriers have also influenced outcomes. Commission research was structured to address these other factors and has attempted as much as possible to assess their individual influences. The results of these efforts follow.

Competition

The fact that competition for available business has increased is not in dispute. Even those smaller, more remote communities that some believed would suffer loss of service as a result of deregulation appear to be enjoying more, rather than less, competition. It is difficult, however, to identify a measure of competitive activity that is not in some respects misleading. Measures employed include the number of new licence applications, the total number of carriers providing service, and shipper reports on competitive interest in specific business.

New entry has certainly occurred, with applications for extraprovincial operating authorities numbering 12,600 in 1988, 10,000 in 1989 and 8,800 in 1990, and declining to 5,800 in 1991 (National Transportation Agency Annual Reviews). However, while this demonstrates significant interest, particularly at the outset, in new business entry it is important not to confuse applications with new trucking ventures or necessarily with new industry capacity. Many applications are simply an expansion of an existing business, perhaps to meet the business expansion needs of a particular client. Others may signal a shift in market focus from one location or territory to another, or in some cases a licence application to enter new markets may be speculative in nature and may not be seriously pursued if opportunities do not materialize. Examples of this are the large number of 48 state authorities issued to carriers, many of them Canadian, following U.S. deregulation in 1980. Many such authorities did not lead to active continent wide market penetration by the carriers holding them.

While the number of new trucking companies reporting to Revenue Canada has increased, the numbers are not nearly as striking as those for licence applications. In 1987 Revenue Canada shows the total number of trucking companies to have been 10,800, increasing to 13,000 by 1989, and to 13,800 in 1990.¹ Perhaps one of the most critical measures of competition is shipper experience. In each of the National Transportation Agency annual (1988-91) surveys, 30 to 40% of shippers responding have reported increases in the number of carriers soliciting their business.

Significant increases in competition are also believed to have occurred with respect to intraprovincial trucking activity in those provinces which have introduced parallel reforms.² Quebec and Prince Edward Island introduced reforms early in 1988, as did New Brunswick, although the latter, as previously noted, was more restrictive in its interpretation. Alberta had always had relatively free intraprovincial entry. Ontario relaxed entry in 1989, but subsequently imposed a two year moratorium on new licences effective April 1991. Nova Scotia will move to a fitness only test in 1993 and, with New Brunswick and Prince Edward Island, is planning, eventually, to establish a joint regulatory body. Traditional tests of public necessity and convenience will then remain only in Manitoba, Saskatchewan and British Columbia.

Less competition for business is occurring in provinces maintaining traditional entry controls. Some evidence suggests that, as shippers restructure distribution systems, they are taking account of the levels of competition within specific jurisdictions. It appears, for example, that western Canadian distribution activities may tend to be established in provinces offering higher levels of trucking competition (e.g., Alberta) and thus avoid provinces of lower intraprovincial competition levels such as Manitoba by serving clients in such provinces through extraprovincial shipments from neighbouring jurisdictions. It is not clear what effect, if any, the Ontario moratorium may have on distribution patterns. Certainly many new authorities were granted in that province prior to April 1991, so that significant competition exists.

The differences between the extraprovincial and intraprovincial regimes is causing changes in local carrier participation in extraprovincial business. This has been most significant in the more restrictive western provinces, where formerly extraprovincial carriers would interline shipments destined for smaller centres with local carriers in major cities. Extraprovincial carriers, now that they may obtain operating authority to any point in a province, often choose to serve smaller centres directly.³

A majority of carriers, as reported in 1990 and 1991 National Transportation Agency surveys, are reporting competition as being "excessive" in many markets. It is not clear to what extent this perception may be attributed to relaxed entry controls or to the recession. The market with the least reported concern about "excessive" competition is Alberta, which has a long history of relaxed entry controls and hence a market in which competition would be least affected by deregulation.

Transborder Trucking

Equity has also been an issue with respect to transborder markets, both from the standpoint of market access and the separate issue of disparity in taxation between the two countries. The issue of market access differs somewhat with the concerns registered among provinces.

In the United States, interstate and transborder trucking activity is regulated federally by the Interstate Commerce Commission. Intrastate activity is regulated by individual states. It is important to note that it is the nature of any particular trucking

activity or transaction that dictates jurisdiction in the U.S., not, as in Canada, the scope of a company's corporate activity. Also of importance is the fact that the Canada/U.S. Trade Agreement does not deal with transportation issues. The prevailing agreement between the two nations regarding trucking is the Brock/Gotleib Agreement, an exchange of letters between the U.S. Trade Representative and Canada's Ambassador in November 1982. Essentially it provides for the carriers of each country to be dealt with in the other jurisdiction in the same way as domestic carriers and provides for consultation with regard to any disputes which arise. It applies only with respect to transborder transportation.

When the U.S. relaxed its entry requirements through the *Motor Carrier Act, 1980* many Canadian carriers obtained full 48 state interstate operating authorities. However, the nature of both U.S. and Canadian customs and immigration laws and regulations is such that while international shipments may be carried, very limited services (cabotage) can be provided by foreign carriers within either country unless they establish local domicile and operate with domestic equipment and labour. Effectively then, for Canadian domiciled carriers, a 48 state authority provided only the opportunity to truck between Canada and the U.S. and return with a load to Canada.

The *MVTA* provided U.S. carriers with similar opportunity to access Canadian markets. In 1989 less than 15% of all applications for extraprovincial authority were by U.S. domiciled carriers. This rose to 20% in 1990 and again to 23% in 1991 (National Transportation Agency Annual Reviews). However, the actual number of applications peaked in 1990 at 1,800 and declined to 1,300 in 1991. The total number of U.S. carriers holding operating authority in Canada increased from 3,000 in 1989 to 5,300 in 1991, with many of these carriers holding several authorities.

Canadian carriers have claimed that while there is now some balance in market entry to transborder business between the two countries, certain states are more restrictive than Canadian provinces in allowing entry into local markets. There is no data on the extent to which this may have inhibited Canadian carrier investment in the U.S.

As far as transborder market share between the industries of the two countries, the data are very limited. A survey conducted at border crossings in 1991 showed that 63% of traffic moved by Canadian carriers. However, there was no attempt to evaluate or compare the respective worth of the Canadian and U.S. shares of the market. Canadian carriers point out that a disproportionate amount of their transborder business is relatively shorthaul, while U.S. carriers dominate in the longer haul markets, in which Canadian domiciled carriers may have difficulty in locating return loads. No data exist to effectively evaluate this claim. Certainly, Canadian based carriers tend to focus on border state business, but trade statistics show that the bulk of Canada/U.S. trade is with those states.

The key issue which has emerged from a public policy perspective is the general differences in cost inputs for carriers domiciled in Canada versus the U.S., with the focus being on disparities in taxation. A compilation of exhaustive studies¹ includes Trimac

estimates of overall cost disparities of 6.5% at an exchange rate of 85 cents U.S. to the Canadian dollar. The gap closes as the value of the Canadian dollar falls. As a result of these examinations/government has moved to close one of the significant taxation differences by reducing the period of capital cost allowance for equipment from seven years to five. The position of carriers is that this should be further reduced to the U.S. period of three years. However, analyses⁵ show that the Canadian trucking industry is not suffering any overall disadvantage in taxation as against U.S. motor carriers in transborder trucking activities.

A more qualitative study by Deloitte & Touche⁶ to examine the competitiveness of Ontario versus U.S. carriers confirms cost disparities but also identifies institutional and management factors which negatively affect the competitiveness of the Ontario industry.

This latter point is confirmed by a comparative review of prevailing management practices prepared for the Commission.

There are, in general, very specific differences in the typical prevailing management approaches found in the trucking industries of Canada and the United States. Furthermore, the differences are of a nature and significance that would give U.S. carriers a cost and service advantage over Canadian carriers, all other things being equal.

(Gough & Gray 1992, p. 3)

Financial Performance

Unfortunately, due to the large number of trucking companies and the fact that very few of them are publicly traded, there is less complete, timely information on this industry than on the air and rail modes considered later in this report. In the area of financial performance, Statistics Canada performs a thorough detailed survey of the industry, but due to the time required for data gathering, tabulation and analysis, its comprehensive annual report of the industry is issued more than two years following the period being reported. (The report on 1989 was issued in March of 1992.) To provide more timely data, Statistics Canada also performs a much less detailed quarterly survey of the largest carriers and a sample of smaller carriers. Information from these surveys is available about six months after the period being reported. While these provide an indication of industry trends, some caution needs to be employed in using this data.

Operating ratios are the common standard of performance measure for the North American trucking industry, where operating expenses are expressed as a percentage revenue. On an operating ratio of 100, expenditures equal revenues and there is no return for interest or owners equity. A comparison of quarterly survey data from 1988 to 1991 shows a steady deterioration in operating ratios on an annual basis from 96.1 to 97.5. More recent data for only the 51 largest carriers show an operating ratio of 101.5 for the first quarter of 1992. Notwithstanding that this is typically an unfavourable

quarter and the large carriers as a group usually perform below the industry average, this appears to be a poor result indeed.

However, in interpreting industry wide data, it is important to consider the extent to which industry results can be skewed by the exceptional performance of a single major carrier. For example, the operating loss reported by Statistics Canada for the top 30 general commodity freight carriers for 1991, \$32.4 million, appears to be accounted for by the operating loss of a single carrier, CP Trucks.⁷ Of the few other carriers obliged to publish annual reports, several are performing profitably. Despite adverse economic circumstances, the managers of some carriers have been able to continue profitable operations.

Apart from regulatory change, it is important to consider other parallel changes which have occurred, notably the recession and also the significant structural change among many major shippers, as well as changing global distribution patterns. It is exceedingly difficult to assess the respective effects of these changes on carrier performance.

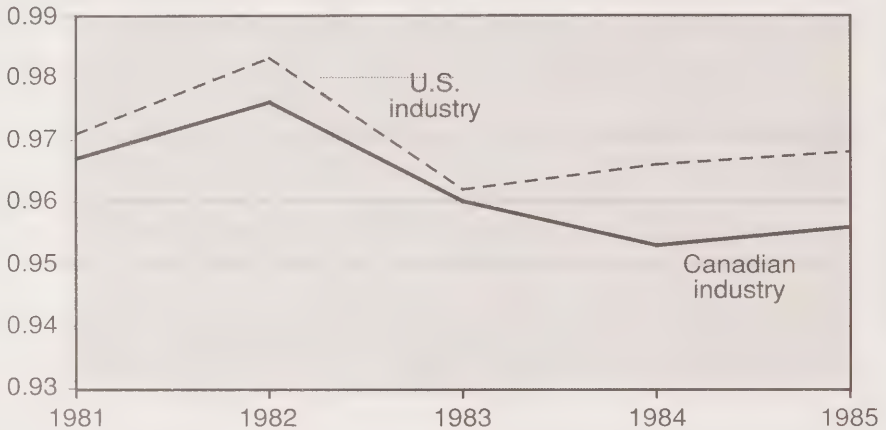
Evidence shows that U.S. carriers are performing better than Canadian carriers. This may mean that the U.S. recession has dealt less severely with the U.S. transportation sector than has the Canadian recession with its industry. It may also be an indication that the U.S. industry, having been exposed to a highly competitive environment since 1980, is in better condition to manage during a recession. A further possibility is that the more diversified and geographically dispersed U.S. economy provides greater opportunity for flexibility in shifting capacity from declining to increasing markets. Certainly U.S. carrier penetration of growing transborder markets since 1989 would seem to indicate that this is a logical hypothesis.

This analysis can be assisted by the research performed by Jones & Beilock,⁸ which indicates that in the early 1980s recessions had a much greater effect on the performance of the U.S. industry than did deregulation. Furthermore, the U.S. industry performance through the 1980s shows that the consequences of deregulation can be managed successfully by the industry. The consequences of recessions, particularly for a highly leveraged industry, are very difficult to manage. This has been clearly demonstrated in many industries other than truck transportation.

To help in segregating the effects of recession and deregulation, drawing on the U.S. experience, two graphs have been prepared comparing the performance of the U.S. and Canadian trucking industries during critical deregulatory/recessionary periods. (Operating ratios are industry wide and obtained from the American Trucking Association and from Statistics Canada — Quarterly Survey data have been used for 1988-91.) Figure 3.1 shows the U.S. industry performing more poorly than the Canadian industry in the years following deregulation in 1980 and the recession in 1982 and the U.S. industry continuing to be outperformed by the Canadian industry through to 1985 as it struggled with the adjustment to deregulation and the aftermath of the recession.

Figure 3.1**Comparison of U.S. and Canadian Trucking Industry, 1981-1985 Operating Ratios**

Operating Ratio (Costs/Revenue)



SOURCES: American Trucking Association and Statistics Canada.

Figure 3.2 shows the performance of both industries in the years leading up to Canadian deregulation and through the recession to 1991. Performance in the two nations draws much closer in the years 1986 to 1989, but with the Canadian industry continuing to outperform the U.S. in three of those four years and falling only marginally behind in 1988. It is only in 1990 that the consequences of the *MVTA* and/or recession catch up with the Canadian industry and it is significantly outperformed by its U.S. counterpart.

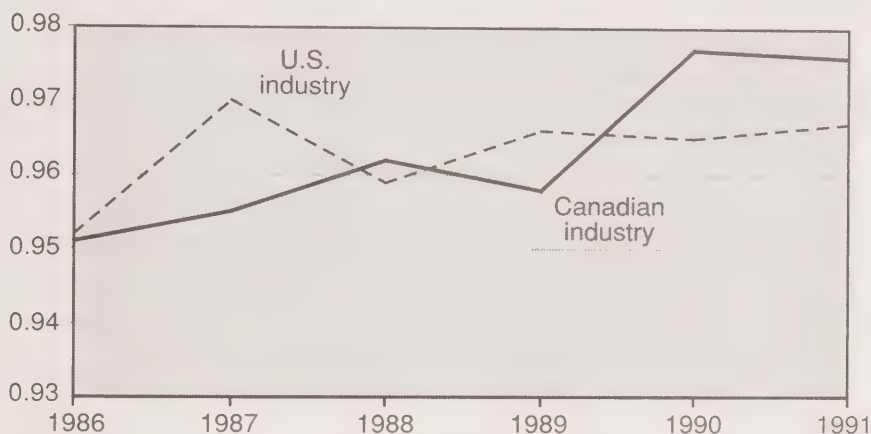
While every attempt possible has been taken to ensure that the data from the respective countries are analogous and consistent, some caution should be used in arriving at firm conclusions. None the less, it is interesting to speculate on the relative effects of recession and deregulation on these performance curves. The post deregulatory curves in each country followed by the respective recessions show a remarkable similarity. These trends support Jones and Beilock's conclusion that recessions have had a greater effect on the industries than deregulation. Furthermore it supports a conclusion that Canadian industry performance should improve gradually following the recession but that prederegulation performance levels may not be attained in the short term.

The structural changes within goods producing industries and changing approaches to logistics management⁹ are having a profound effect on the nature of transportation demand. The type of service needed to meet these demands often results

in higher costs, particularly at the outset when management systems and processes may need to be changed or investment in new controls required.

Figure 3.2
Comparison of U.S. and Canadian Trucking Industry, 1986-1991
Operating Ratios

Operating Ratio (Costs/Revenue)



SOURCES: American Trucking Association and Statistics Canada.

One further hypothesis can be offered for the trucking industry's apparent difficulty in rising to the combined challenges of increased competition, declining demand and more particular customers. In previous downturns in the economy or shifts in demand, truckers could always seek to attract business away from the railways. However, today, the railways have less truck competitive traffic. Most business for which truckers can compete successfully has already shifted to the highway mode, and this source of new business has been depleted.

Finally carriers and carrier organizations, while attributing poor performance primarily to "excessive" competition, also point out the inefficiencies and regulatory burdens resulting from lack of uniformity and differing standards among jurisdictions.

The recent relatively poor financial performance of the trucking industry may be contributing to a reluctance to invest in newer, more efficient vehicles and sophisticated computer and communication systems which could contribute to improved performance. Comparative studies of the trucking industry in Ontario versus the U.S. identify that Ontario carriers keep equipment in service longer than their U.S. counterparts. In the

case of tractors, Ontario carriers kept their equipment in service an average of 5.4 years versus 4.2 years in the U.S.; for trailers the Ontario figure was 8.2 years against 6.6 years in the U.S.¹⁰ This longer retention may contribute toward their other finding that Ontario carriers have higher maintenance costs. Certainly the disparity in capital cost allowances between the U.S. and Canada is a factor in Canadian carriers' decisions to renew vehicles less frequently. While the capital cost allowance period in Canada has been reduced recently, it still lags behind the U.S. period of a complete write-off in three years.

With respect to advanced computerization, satellite tracking and communications systems, U.S. carriers have moved more quickly to make the necessary investments. Several U.S. carriers have EDI capability and are moving to implement bar coding. The slower pace of similar investment in Canada may be partly a function of reluctance to invest further in an industry which is performing poorly but may also be rooted in the difficulty of obtaining an adequate return for large capital investment within smaller Canadian companies.

Exit

Exit from the industry, or from specific markets is accomplished in several ways. Bankruptcies are reported and tend to attract public attention. Mergers are less well documented and tend to attract public attention only if companies are of significant size. Total withdrawal from business or withdrawal from select markets may attract no attention and may receive no public disclosure.

The incidence of bankruptcy in trucking peaked in the 1982 recession, approaching 600, and then declined annually, bottoming out below 400 in 1985. The 1982 peak was not surpassed until 1990 with 656 bankruptcies and this was exceeded in 1991 with 763. However, bankruptcy data do not provide accurate detail of the size of failed enterprises (*NTA Annual Review* 1991). Certainly many of the failures are smaller enterprises. Of the 1990 failures only 6% were companies holding extraprovincial licences. This percentage rises to 8.5% in 1991. The pattern of bankruptcy in trucking tends to follow that of business generally.

Some difficulty exists in rationalizing among data sources. The NTA Reviews employ data from bankruptcy filings which include many smaller operations and a high number of unincorporated entities. Revenue Canada figures for corporations show industry exits (including bankruptcies) to be only 0.3% in both 1989 and 1990.¹¹ This supports a view that the vast number of bankruptcies identified by the NTA are owner operators. This indicates that there are problems regarding this type of entrepreneur but also that caution should be employed in analyzing industry bankruptcies and drawing any conclusions between the provisions of the *MVTA* and trucking industry failures. Regardless of the specific source, the number of bankruptcies in trucking is a very small percentage of the total number of companies. Furthermore, bankruptcy or business closure is often accompanied by merger or acquisition of all or a portion of the assets

and ongoing business by other carriers. Many of these actions go unreported and unnoticed by anyone other than customers and suppliers of the companies concerned.

An example of the range of actions that can occur and the varying degree of public notice was the closure of Thompson Transport of St. Thomas, Ontario and the shifting of its business to a Michigan base. This was widely heralded as evidence of a Canadian carrier being unable to compete in transborder markets with U.S. based carriers. It is now understood that the Thompson Transport interests have since merged to form a joint operation with Frederick Transport, another Ontario based carrier also possessing a U.S. operating subsidiary. It is not clear what one should divine from this sequence of events other than that the transborder trucking industry, like many others, is undergoing change and is restructuring in response to market pressures and changing demands.

Management Issues

Disquieting is the observation that management of the Canadian trucking industry does not appear to be as aggressive or sophisticated in its approach as is the case in the U.S. While there may be exceptions among individual companies, the limited research which has been performed shows that U.S. carrier management leads the Canadian industry in human resource management, safety programs, operations management, cost and quality control, and marketing. This may be explained by U.S. carrier management's longer exposure (12 years versus 5) to a deregulated and hence highly competitive business environment.

Carrier Efficiency

Deregulation was intended to provide opportunity for improving carrier efficiency. Certainly, the removal of route restrictions and the latitude to be licensed for broad geographic areas and commodity descriptions improved possibilities for reducing the incidence of empty movements and should have contributed to efficiency gains. Unfortunately, very little hard data exist to evaluate what has occurred. Research conducted in Ontario,¹² based on 1987 inspection station surveys, identified opportunities for industry reduction in empty backhauls between northern and southern Ontario if licence restrictions were removed. While comparable survey data have been collected in Ontario in 1992, they have yet to be tabulated and analyzed. Indeed, overcapacity induced by the recession may have had an adverse impact on carrier operating efficiency and may have cancelled out gains made possible by the *MVTA*.

There are reports that deregulation has resulted in increased opportunities for triangular route patterns. Many of these involve two transborder legs to support one domestic movement (e.g., Toronto-Winnipeg-Chicago-Toronto), with each leg providing revenue.

Prior to the easing of extraprovincial entry, a general commodity carrier with Ontario-Manitoba authority may have had a high incidence of empty eastbound returns.

Carrier Employment

Employment in the trucking industry has traditionally risen and fallen with business cycles. Statistics Canada data cited in the *National Transportation Agency Annual Report 1991* show that employment peaked at 125,000 in 1980, falling to 100,000 in 1983 following the recession. From that point it was reported to have risen steadily to 117,000 in 1989 and then declined to 94,000 in 1991. These figures do not include owner operators, although they form a significant portion of labour within the industry. However, Statistics Canada methodology employed in gathering this data has been changed substantially in 1992, making ongoing comparisons very difficult.

ISSUES AND CONCERNS

A variety of issues and concerns have been raised by stakeholders. These relate primarily to the continuing regulatory framework, the future prospects for operators in a rapidly changing marketplace, and the ability of carriers to provide efficient low cost services within a highly competitive continental trading context. These concerns have been addressed in Volume I. This section deals only with the background research work.

Several Canadian operators see the deregulatory process as one which was necessary to support Canadian industry in increasingly competitive continental and global markets. Their challenge is to operate profitably within a rapidly changing marketplace. They are seeking government support through simplification of regulatory processes. Despite the bleak overall industry financial performance, it is possible to identify carriers which are functioning effectively and profitably and, during the recession, restructuring operations, expanding selectively into new markets, and acquiring assets and market share of less fortunate operators who have withdrawn from business.

Reverse Onus

In their submissions and in consultations with the Commission shipper organizations have, without exception, advocated the termination of the reverse onus entry test and its replacement by a fitness test on January 1, 1993, as provided for in the legislation. Research has failed to identify that the reverse onus public interest test has been a broad effective barrier to entry.¹³ Certainly, it represented a barrier at the outset in a few jurisdictions in specific markets, but the extent to which the industry as a whole has been protected from new competition is minimal.

The Canadian Trucking Association (CTA) made a plea to the NTARC for reverse onus retention pending the introduction of a "meaningful" fitness test. However, individual carrier submissions and consultation with carriers failed to reveal a broad base of support for retention of reverse onus provisions. Allowing reverse onus to sunset would clearly be welcomed by shipper groups as evidence of government commitment to deregulation generally. Extending reverse onus would have been interpreted by carriers as government having second thoughts about regulatory direction and by regulatory bodies as a message to be more interventionist.

Three governments — Manitoba, Saskatchewan and Yukon — have recommended continuing reverse onus beyond the present sunset. The Atlantic Provinces, Quebec and Alberta favour allowing it to lapse.

Fitness Test

The fitness test is a very important issue in this review. It is substantive and real and the ultimate outcome has the potential for significant effect on the regulatory process, the trucking industry and those dependent on its services. There are two key aspects of the fitness test, which in the absence of a public interest test would be the sole entry test, on which all parties agree:

- Safety it should screen out potentially unsafe operators; and
- Uniformity it should be the same in substance and application in all jurisdictions.

The CTA wants the fitness test to go one step further. It advocates that a detailed business plan be filed with the regulatory body and that the plan include the following elements:

- a detailed plan of the proposed service, including geographic coverage, number and type of vehicles, etc.;
- a detailed financial plan, including sources and availability of capital;
- a sales and marketing plan;
- a detailed operational plan, including safety, maintenance and training programs;
- a staffing plan, including the qualification requirements for management;
- a budget proposal;
- a pro forma income statement and cash flow; and
- proof of insurability to \$5 million.

It is proposed that this plan would be reviewed with the applicant at a hearing or interview.

The CTA further recommends that only a temporary licence be issued pending an audit during the first 180 days to ensure that the business plan is being followed.

The measures requested by the CTA are certainly unique in that they differ from any entry tests in other North American jurisdictions. However, in submissions to the Commission, Ontario and Manitoba advocated the filing of a business plan.

The CTA has not elaborated, formally, on how the business plan would be evaluated or on what criteria a plan might be considered the basis for acceptance or rejection of an application. In its consultation with the Commission, the CTA suggested

that the evaluation might be performed on a basis similar to that employed by provincial/territorial regulatory bodies in determining “public necessity and convenience” under the former legislation (*MVTA, 1954*).

Shipper groups, mentioning the issue in their submissions, are universally opposed to the incorporation of a business plan. However, the Canadian Industrial Transportation League reports a minority of members (30%) favouring the incorporation of some form of enhanced fitness test addressing fiscal or business responsibility. The following paragraphs outline the arguments advanced by those opposed to the incorporation of a business plan.

The issue would appear to be one of addressing whether or not there are some unique features of the trucking industry requiring some greater measure of protection of investors and consumers from the likelihood of financial failure of carriers. In considering this issue, it is important to reflect on the groups investing in trucking industry ventures and employing industry services.

There are few Canadian trucking companies listed on Canadian stock exchanges. Most raise capital privately, with senior management being major shareholders in many companies. The industry relies heavily on debt financing. Banks and the financial subsidiaries of vehicle equipment suppliers are major creditors. These financial institutions should not require regulatory protection from imprudent entrants into the trucking industry. The general public forms only a small minority of trucking industry clientele. (The only significant exception to this is the household goods trucking sector.) Most customers are businesses familiar with taking reasonable precaution against the consequences of entering into business dealings with companies likely to fail. Consequently it is difficult to support the notion that a business plan component of a fitness test is necessary to protect potential clients.

A further consideration is the extent to which carrier failures may be prevented by an evaluation of its initial business plan. Presumably most businesses have a plausible plan at the outset, in order to raise capital. Problems, if any, arise later when the business plan fails to be realized for any of a variety of reasons, which may have little bearing on the worth of the business plan. Indeed, many of the more significant bankrupts in recent years have been older, well established, companies which have failed to adjust to rapidly changing market demand and the effective competition of newer and more flexible, competitors.

Harmony in Regulation, Regulatory Process and Enforcement

A recurring concern in submissions from the trucking industry, its customers and provincial governments is the need for greater harmony among jurisdictions in establishing and enforcing regulations. Problems of harmony or uniformity stem from the fact that much of the responsibility for regulating the industry resides at the provincial level. Indeed any federal responsibilities are effectively delegated under the *MVTA* to the provinces. From a practical perspective, provincial government officials tend to lose sight

of the differing constitutional and legislated responsibilities for extraprovincial and intraprovincial trucking. Regulatory mechanisms and processes tend to be established in a uniform manner within each jurisdiction to deal with trucking activity regardless of whether the province has constitutional or delegated authority for any particular activity.

Submissions from the trucking industry call for a greater federal role and stronger national leadership in developing uniformity in the following areas in order to facilitate growth of a more efficient national trucking industry.

a. Entry Regulation

With some exceptions, under the reverse onus provisions of the *MVTA* the provinces have gradually come to greater uniformity in addressing extraprovincial trucking entry. With the removal of the reverse onus public interest test and entry based on the application of a national code of fitness, there is reasonable expectation that entry controls and their application will become more uniform. However, significant differences exist with respect to intraprovincial trucking entry.

In implementing the provisions of the *MVTA*, several provinces introduced parallel reforms with respect to intraprovincial trucking entry controls. From the outset, provinces such as Quebec, Ontario and Alberta effectively granted operating authority on similar criteria regardless of the scope of the operation. However, other provinces, notably Manitoba, Saskatchewan and British Columbia, continued to exercise restrictive public interest tests regarding intraprovincial licences regardless of whether or not the applicant was an extraprovincial undertaking within the definition of the *MVTA*. This they had a right to do by virtue of section 13 of the Act. More recently, differences have arisen in Ontario with the two year moratorium on the issuance of intraprovincial licences, due to expire in April 1993.

Shippers and carriers are concerned about the uncertainty created by the Ontario moratorium, and the permanency of deregulation in some provinces. The uncertainty is considered detrimental to long term planning, while the moratorium sends a negative signal to potential foreign investors that is bad for business. (Prentice 1992, page iii)

In submissions, Quebec, Alberta and Yukon have identified the inequity which results from lack of uniform national treatment of intraprovincial entry. Alberta based carriers, for example, may be granted authority to operate between Alberta and Ontario but may be denied intraprovincial authority to complement their extraprovincial activity (e.g., the opportunity to conduct local business between Toronto and Thunder Bay as an element in transcontinental movement). Yukon Territory has expressed specific concerns regarding the inability of Yukon carriers to access British Columbia intraprovincial markets.

If the federal government wished to provide leadership in this area, it has the constitutional authority to modify the legislation to require that provinces address all entry applications from federal undertakings (i.e., carriers operating extraprovincially) by applying only a fitness test. Provinces could then have a more restrictive test for local undertakings (i.e., those that operate strictly within the province). However, they would be unlikely to do so, since such carriers, if denied entry, could restructure their businesses in order to qualify as a federal undertaking.

b. Vehicle Size and Weight Regulation

While interjurisdictional agreements have been reached on specific vehicle configurations which may operate from coast to coast, considerable lack of uniformity exists among jurisdictions with respect to vehicle size and weight regulations. Even greater disparity exists between Canadian and U.S. jurisdictions. Concern about this issue has been registered in submissions by the trucking industry, by several shipper groups, by Alberta explicitly and by some other provinces implicitly.

Lack of uniformity has several adverse effects on transportation efficiency. Within jurisdictions which stipulate lower gross weights or lower cube vehicles than those prevailing elsewhere, shippers suffer competitive disadvantage in accessing markets. A Toronto Board of Trade representative cited the example of U.S. eastern competitors being able to access western Canadian markets employing longer 53-foot trailers, which are permitted in western Canada and most U.S. states but not allowed free access in Ontario. He indicated that this contributed to lower freight costs for U.S. producers than those available to Ontario manufacturers. This analysis was confirmed by research performed for the Commission.

There is, apparently, little justification for this and the six eastern provinces and five US states (only one of which borders Canada) which restrict lengths in this fashion may soon find their industries are at a competitive disadvantage to those located in most other areas where 53-foot or longer is the norm. (Nix 1991, p.ii)

Further costs are incurred by carriers. They must either restrict vehicles and vehicle combinations within their fleets to those which meet the "lowest common denominator" of the jurisdictions they serve or they must maintain separate fleets with differing characteristics in order to optimize loadings within specific jurisdictions. In addition, concern about future vehicle dimension change inhibits fleet acquisition and replacement decisions. In consultations with the Commission, an Ontario-based carrier reported deferring trailer purchases worth \$3 million due to uncertainty regarding future Ontario decisions regarding trailer length.

While there is a popular perception that pavement wear and highway safety are compelling reasons to constrain vehicle size and weights, this view is not supported by

an examination of the specific anomalies among Canadian jurisdictions. Nix¹⁴ states that pavement wear could be reduced without compromising safety by allowing 53-foot trailers, and a compelling case can also be made for the longer 25-metre overall vehicle combination east of the Ontario/Manitoba border.

The anomalies identified by Nix should be addressed. However, longer term interests would be served by arriving at some more effective means of establishing national size and weight standards. The current process calls for discussion and negotiation among the jurisdictions conducted through CCMTA and the Council of Ministers, with individual jurisdictions responsible for implementation of any consensus. While considerable progress has been made in recent years, it is very time consuming and, as evidenced by the research, produces imperfect results. It is possible that the provinces/territories would not be amenable to a greater federal role in this matter, since they perceive a strong linkage between the activity permitted on the highway and their individual obligations to build and maintain the infrastructure. In the U.S., the federal government has been successful in establishing national interstate size and weight standards by making state acceptance a requirement for disbursement of federal funds to support interstate highways. In Canada, with the very limited past federal contribution to highway building and maintenance, there has been little opportunity for a similar strategy.

By far the greatest barrier to efficient trucking is the considerable disparity in size and weight limits between the U.S. and Canada. U.S. restrictions are generally more stringent than those in Canada, with the U.S. allowance of the higher cube 53-foot trailer being the only exception. U.S. movement toward Canadian standards would benefit the exporters of bulk material into certain U.S. markets and improve the efficiency of transportation in both directions. (The Alberta government has negotiated heavier loading to the Burlington Northern railhead at Shelby with the State of Montana.) The federal government has a role in addressing this international issue and it has been discussed in the North American Free Trade Agreement (NAFTA) negotiations, since Mexico has a similar interest in having U.S. limits increased. However, it is unlikely that any agreement on change will be reached in the near future.

c. Enforcement

Enforcement is a general term employed to cover the mechanisms by which the provinces/territories promote compliance with legislation, regulation and other standards, including mechanisms for prosecution of offenders. The emphasis within Canadian jurisdictions is on promoting compliance rather than punishing transgression. Enforcement is accomplished through examination of vehicles and records at permanent roadside inspection stations, on the highway by mobile inspection teams, and at carrier terminals and offices. Enforcement is the responsibility of the jurisdiction in which a carrier is operating. Interjurisdictional agreements ensure that records and information

are shared and that access to carrier records of other jurisdictions, including U.S. states, is assured.

With the demise of economic regulation, safety is a key focus of enforcement. The condition of vehicles, adherence to hours of work regulation, load securing and axle loading are important elements. Inspectors are also responsible for enforcing a variety of other requirements, including dangerous goods regulations, fuel tax reporting, and even customs and immigration rules in situations related to illegal cabotage.

The Canadian Trucking Association states in its submission:

The lack of enforcement in Canada consistently places public safety at risk and has jeopardized the responsible trucking industry by allowing marginals to operate without meeting all regulatory requirements and to avoid contributing their fair share to the tax system. (page 25)

While there are few data to support this allegation, it shows the intensity of the perception of unsafe and irresponsible behaviour. Certainly, “safety blitzes” identify an alarming percentage of below standard vehicles. However, the severity of individual failings and the percentage of really serious problems are not clear. Furthermore, the corporate identity of transgressors is not published, so that the CTA assertion that fault lies mainly with “marginals” cannot be evaluated.

Concern has been registered by the industry regarding standards of enforcement and uniformity among jurisdictions. Individual carriers express concern about differing approaches to enforcement in the U.S. It is claimed that U.S. authorities are much quicker to encourage compliance through heavy fines and/or imprisonment than their Canadian counterparts. Other complaints relate to varying tolerances among Canadian jurisdictions for marginal transgressions, resulting in a load passing inspection in one province but being detained in another.

Alberta is a leader in interjurisdictional enforcement co-operation, working closely with neighbouring jurisdictions to improve enforcement standards and reduce duplication and costs. A joint inspection facility at the Montana border is staffed by personnel from both jurisdictions who function jointly to enforce the provisions of both Alberta and Montana legislation, as well as any applicable federal legislation of both countries.

Two Canadian provinces are co-operating with certain U.S. states to develop mechanisms for allowing long haul trucks to be inspected only once at the first inspection station they encounter and they would then be authorized to drive past subsequent inspection stations of participating jurisdictions. Ontario is participating with eastern states along Interstate 75 between Ontario and Florida to develop an appropriate system. In the west, British Columbia is participating in a similar venture with pacific coast states. Ultimately such systems may incorporate electronic monitoring.

Implementation of such programs will diminish enforcement costs and improve carrier efficiency.

Multijurisdiction Reporting

Carriers have raised the issue of multijurisdictional reporting. When operations span several provinces, carriers are obliged to report to each for licensing, fuel taxes and other regulatory requirements. Carrier operating costs could be reduced if a central body received and processed all fees, taxes and information.

Competitiveness

Industry competitiveness appears to be less of an issue since the exhaustive study by a federal task force on trucking and the federal government's tax concessions to the industry of December 6, 1991. Many still complain, despite evidence and analysis to the contrary, that the "playing field is not level" between Canadian and U.S. participants in transborder markets. It is certainly true that Canada continues to require a longer capital cost allowance period for equipment than does the U.S. It is probable that this is one factor contributing to longer equipment retention periods by Canadian carriers and resulting in higher operating costs of older vehicles.

Beyond this it is difficult to support, on balance, that Canadian carriers lack competitive opportunity based on government policies. However, individual carriers continue to cite overall cost differentials as high as 6 or 7%, although some concede that rapidly rising U.S. health benefit costs are closing the gap. One other important factor is the economies of scale of very large U.S. carriers,¹⁵ with this including the truckload as well as the less than truckload industry. While for many years it was presumed that there were few economies of scale in the truckload segment of the market, the advent of very large carriers, with the ability to modify input costs, and the growing importance of sophisticated data processing and management systems, have resulted in economies which small carriers cannot fully emulate.

Perhaps one of the most significant points to emerge from the competition debate is the fact that trucking industry taxation is a product of federal and provincial government taxation policy and revenue needs, rather than a function of either level of government's transportation policy. This is an important issue and one that has often been overlooked by industry.

Infrastructure

The perception of the general public is that taxes, in Canada, related to highway use are earmarked in government coffers to support the building and maintenance of highways. The reality is that while the U.S. has a system of dedicated taxation (taxing to support a specific public service), Canada does not. While there is no tangible link between taxation source and expenditure, the public perception persists. It is considered unfair that federal taxes collected on vehicle fuel are not spent on highways. The perception

expands to embrace the notion that various categories of highway users should each pay their fair share of the total cost, despite the insuperable difficulty of dividing those costs in an objective manner.

As a result, the railways believe that the truckers do not pay a fair share of the cost of highways and that somehow their own fuel taxes are used to subsidize truckers. The truckers believe that their taxes are too high for the standard of highway being provided and furthermore point out that much of the highway infrastructure is in places where they have little need of it, while major urban areas lack adequate highways to support trucking efficiency.

In the final analysis, the investment in highway infrastructure, and how it is funded, is more of a political than an economic question. There are few, if any, situations in Canada where the lack of adequate highways can be demonstrated to be impeding economic activity. In other words, the highway condition and capacity are adequate for the trucks to get through at something close to minimum costs. In many cases improved highways might be safer and result in a more pleasing driving experience. The usual reasons for highway improvement are safety, reduction of congestion near urban areas, and improved access to remote regions. Improving trucking efficiency or reducing its costs are seldom cited as reasons for highway investment.

New technologies are making it possible to assess charges based on highway use without the cumbersome practice of collection at toll gates. Sensors can monitor use and assess differentiated charges founded on the nature and time of use. This permits governments, should they choose to do so, to charge more fairly for highway use. However, the decision to employ the technology, the extent of cost recovery, and the manner of sharing costs among various users will remain policy issues, which governments may view more as taxation than as transportation issues.

There is concern that the nation's highway infrastructure is inadequate to support growing truck traffic and that standards of maintenance may be declining. Certainly the withdrawal of rail services in some parts of the country has required increased spending on highway networks. Similarly, shifts in trade patterns and new approaches to inventory management have increased the flow of trucks between Canada and the U.S. and through already heavily travelled urban regions in central Canada. Difficulties have also arisen in accommodating increased volumes of trucks across international bridges between Ontario and the U.S.

While the federal government contributed to the original TransCanada Highway and periodically participates in funding specific highway projects in certain provinces, the main burden of highway building and the cost of maintenance falls on the provinces. There have been expectations of a 10-year joint federal/provincial program allocating \$1.4 billion to highway improvement projects with half the funding to be provided by the federal government. However, disagreements have arisen concerning allocation of federal funds among the provinces and regarding priorities. Some provinces, such as New Brunswick, Manitoba and Saskatchewan, see their transprovincial highways fulfilling a

national role in providing linkages between more populous provinces and consequently an appropriate investment for the federal government. Others, such as Ontario, would prefer to use any available federal funding to relieve congestion on existing multi-lane highways connecting its industrial centres and providing access to the U.S. market.

The recent announcement of the federal government to allocate \$500 million over two years to national highway projects has caused further dissension since some jurisdictions such as New Brunswick, Alberta and Yukon Territory are major beneficiaries of the program and others such as Ontario and Manitoba seem to have been left out. Furthermore, it is not clear whether this is the initial phase of the larger 10-year program which had been anticipated or simply an initiative to address the more important deficiencies of the national highway system, while also providing needed short term economic stimulus.

Owner Operators

Owner operators, who own and operate their own tractors and in some cases both tractor and trailer, have been very vocal in identifying competitive problems and their own difficulties in dealing with the carriers who engage them. However, they have not made any submission to this Commission. Federal actions have already addressed some of their concerns, and perhaps they thought that the Commission's mandate precluded consideration of their specific problems.

Basically, owner operators had two primary concerns: first, that they have little negotiating clout with their carrier employers and, second, that their costs are higher than U.S. competitors. The latter point was addressed at least partially by a federal rebate of diesel fuel excise tax and the funding of a co-operative to reduce equipment purchase costs.

The Canadian Industrial Transportation League has proposed that owner operators receive some statutory definition as independent contractors. The Quebec government proposed that there be some statutory terms for agreements between carriers and owner operators.

A survey performed by the Ontario Ministry of Transportation shows that a majority of responding owner operators identify a need for improving their business skills in order to be more successful.¹⁶ Regardless of whether skills are upgraded, the nature of their investment and practical carrier management decisions will result in owner operators bearing the brunt of any broad downturn in trucking demand. It is reasonable to conclude that fewer difficulties will arise in the future if potential owner operators have more knowledge and understanding of the demands of the business and the risks involved. Perhaps, also, financial institutions should have a clearer understanding of this activity and the associated risks.

In September 1990, the Council of Ministers Responsible for Transportation and Highway Safety referred several of the owner operators' concerns to a CCMTA task force. The task force included representation from owner operators and the carriers, the

federal government and several provincial governments. The task force recommended specific legislative remedies which can be incorporated into provincial legislation to standardize owner operator contracts and vehicle registration arrangements and to ensure financial accountability of load brokers. Implementation will be the responsibility of individual jurisdictions.¹⁷

FUTURE DEVELOPMENTS

The future of Canada's trucking industry will depend on several key factors:

1. changed demand, the nature and volume of which will be driven by globalized multinational corporations and trade opportunities;
2. the extent to which Canadian trucking industry management is able to lead a distinctive Canadian industry within a continentalized market;
3. the extent to which integrated, intermodal transportation systems emerge as major, viable options to long haul trucking and the role which the Canadian trucking industry assumes within such systems; and
4. the Canadian regulatory and taxation regimes which will continue to influence competition with U.S. based carriers in the highly competitive transborder market.

Each of these will now be examined in more detail.

Changed Demand

Demand for trucking services will be increasingly driven by Canada's trading relationship with the U.S. and Mexico, as well as emerging changes in logistics practices affecting both international and domestic goods distribution.

The portion of revenue which carriers derive from transborder operations is increasing.¹⁸ This supports the overwhelming commentary regarding a shift from east/west to north/south goods distribution. This may be due, in part, to the Canada-U.S. Trade Agreement but also has its roots in an increasing globalization of goods production and distribution and changing logistics practices which focus on overall efficiency rather than specific cost elements. The research identifies logistics trends which result in the reduction of distribution points and stages within the distribution system, as well as continuing reductions in inventory levels.¹⁹

Simplistically, with respect to manufactured goods and their distribution, the trend is toward movement as directly as possible from point of production to point of consumption. Much of our national transportation infrastructure has been founded on goods being either produced in, or imported to, central Canada and then distributed nationally. In future, the range of goods produced in central Canada will narrow and will

be distributed continentally and globally. Imported goods, particularly from the U.S., will move directly from origin to Canadian destination without much of the traditional redistribution activity now based in central Canada and, to a lesser extent, in the British Columbia lower mainland. Within this new, more direct distribution system, shippers will tend to single source responsibility for transportation service and performance. This could be provided by a single carrier, by specific carriers for particular markets, or by a third party with overall responsibility for all elements in the transportation process. Carriers offering direct point to point services covering broad geographic areas will have an advantage.

Regional carriers will need strong partnerships if they wish to participate in a seamless transportation service beyond their direct service territory.

In addition to these changes, shippers will continue current trends of reducing the incidence of carrier or third party supplier contact and will continue practices of long term contracts covering all aspects of service.

Carriers that succeed will be those that recognize these changes and restructure their corporations to address the demands of this changing marketplace. There is no question that larger, highly efficient carriers will have greater opportunity. Smaller, regional carrier opportunity will lie in developing partnerships among themselves or with third party operators and in identifying regional market niches that may focus on specific local industry needs or specialized services.

Canadian Trucking in a Continental Market

The Canadian trucking industry will not escape the trend toward globalization in service sector industries. Major U.S. carriers will capitalize on the increased north/south movement of goods to continue adding transborder spokes to their U.S. distribution hubs. The extent to which U.S. carriers may develop Canadian hubs and provide domestic Canadian services will depend largely on the quality of existing domestic service and the extent to which U.S. operators perceive they can profitably participate in these markets. Trends in other service industries indicate that once U.S. interests establish a Canadian presence and identity, the nationality of carrier ownership will become less and less of a public policy issue.

Canadian carriers will have less opportunity to penetrate into U.S. markets simply because operating from a Canadian base into the much larger U.S. market is more difficult than for U.S. carriers to include Canada as a marginal addition to their larger domestic market. Canadian carriers will find it difficult to establish themselves in major markets beyond gateway U.S. cities. Those that succeed will be well managed, probably specialized, and will grow largely through acquisition rather than penetration of markets in competition with U.S. carriers (Trimac Transportation Services Ltd. is an example).

The Canadian industry will have to work hard at retaining its role within the domestic market for two reasons. First, it must be strong enough to withstand competition from U.S. entrants. Second, it must continue to provide a viable efficient

national distribution system. Should it fail to do this, goods producers and distributors will find it increasingly attractive to distribute to Canadian markets from U.S. centres and thus continue to reinforce a continent wide hub and spoke transportation system, with relatively few Canadian based hubs and an increasing number of transborder spokes.

The NAFTA, if ratified by all three countries, will provide additional opportunity for the carriers of all three countries as trade grows. Essentially NAFTA changes nothing with respect to Canada/U.S. transborder trucking. However, three years after the agreement goes into effect, Canadian and U.S. truckers will have direct access to Mexican border states. After six years, access will be permitted to all of Mexico with equivalent opportunity for Mexican truckers to participate in transborder trucking. It is important to note that cabotage will not be permitted, but that carriers of any of the three nations may carry goods across any border. There will also be a phased opportunity for Canadians to invest in Mexican trucking companies — 49% after 3 years, 51% after 7 years, and 100% after 10 years but only in Mexican companies operating exclusively in international carriage.

Because of their geographical position, U.S. carriers will have an advantage in developing business between Mexico and both the U.S. and Canada. Traffic between Canada and Mexico can easily be processed through major U.S. carrier hubs in the midwest, Texas and California. Canadian carriers may find it difficult to compete successfully in this market without establishing subsidiary operations in the U.S.

Role of Intermodal Systems

Intermodal issues are addressed in Chapter 7. However, it is important to reflect on the potential effects of intermodal developments on the Canadian trucking industry. In the U.S. some of the large efficient truckload carriers are forging strong intermodal business partnerships with the railways. The absence of similar developments in Canada may have a profound negative effect on the Canadian long haul trucking industry. Any sudden unforeseen increase in a major trucking cost component, such as fuel, could shift the relative economics between over the highway trucking and intermodal services quite dramatically, with profound consequences for a trucking industry which had not forged intermodal alliances.

Regulatory and Taxation Regimes

As has been seen by recent studies of transborder trucking, there are compelling reasons to have a reasonable degree of equity between the regimes of the two countries in regulatory and taxation matters. Failure to do so clearly gives advantage to the carriers of one domicile or the other. For the purpose of assessing the future of the Canadian trucking industry, it is important to focus on those elements which have been shown to cause difficulty for Canadian carriers. However, in doing so, it is important to consider that it is impractical to have mirror image regimes on each side of the border. What is required is that government regulatory and taxation policies and practices have the same

net effect on the ability of carriers domiciled in one nation to compete with those of the other. Canadian carrier taxation concerns fall into two specific areas — capital cost allowances and enforcement.

The longer period (five years versus three years) for capital cost allowance is a disadvantage to Canadian carriers. In the longer term it will result in Canadian carriers domiciling transborder fleets with U.S. subsidiaries. Ultimately the balance of transborder traffic could tend toward the U.S. based fleets. This specific danger exists even despite the findings of previous research, cited earlier, that Canadian motor carriers do not have an overall disadvantage compared with U.S. carriers in transborder trucking.

Canadian carriers perceive inequities in enforcement between U.S. and Canadian regimes. This disparity, of itself, does not necessarily cause any inequity since carriers of both nations are subject to the level of enforcement in the jurisdiction in which they operate. However, it does cause inequity if carriers domiciled locally are subject to a differing standard of enforcement than foreign based carriers. A key area of concern is fuel taxation. Taxes must be paid in the jurisdiction in which fuel is consumed. Canadian carriers allege that U.S. truckers enter Canada with lower taxed U.S. fuel and that Canadian enforcement mechanisms are inadequate to ensure that Canadian provincial and federal taxes are paid. If this is true, then U.S. carriers who successfully evade Canadian taxes have an advantage which over time may influence transborder market share. While Canadian governments claim that enforcement mechanisms are adequate, Canadian trucking interests continue to perceive that there is a problem. In addition, Canadian courts obviously lack jurisdiction in the U.S., and there can be difficulties in serving U.S. domiciled carriers with summonses once vehicles have left Canada (Ontario Ministry of Transportation submission, page 9).

INTERCITY BUS INDUSTRY

The intercity bus industry in Canada is dominated by Greyhound Lines of Canada Ltd., a profitable company providing scheduled services throughout western Canada and as far east as Toronto. It has recently reached agreement in principle to purchase Gray Coach Lines Limited of Toronto, which is in financial difficulties, and this would give Greyhound access to southern Ontario markets. The second largest carrier, Voyageur Colonial Limited, operates in the Toronto, Ottawa, Montreal triangle and has been reported to have been unprofitable for the past five years. Smaller regional carriers provide services in most provinces, but the incidence of intramodal competition is minimal. The industry is dominated in Saskatchewan and northeastern Ontario by unprofitable provincial crown corporations and in Newfoundland by the heavily subsidized federal crown corporation, Roadcruiser.

In addition to scheduled services, carriers also offer tour and charter services. These are often important business segments, which dominate the activity of some of the smaller companies. It is believed that these activities often cross-subsidize scheduled

services. Furthermore, higher density routes may subsidize services to small centres and rural areas. Indeed this is encouraged by regulatory bodies.

Regulation of extraprovincial bus undertakings is a federal responsibility which has been delegated to the provinces to regulate in like manner to local undertakings since 1954. These provisions were unchanged in the *Motor Vehicle Transport Act, 1987*. The federal government did not attempt to distinguish in that act between extraprovincial and intraprovincial activities as it did for trucking, nor did it attempt to set out provisions or criteria for licensing. Since most bus carriers are licensed extraprovincially, at least for charter services, the industry is dominated by extraprovincial undertakings.

Provincial regulatory bodies actively regulate entry, exit and fares. Roadcruiser, in Newfoundland, is an exception. It is regulated directly by the federal government through the National Transportation Agency.

The bus industry faces continuing reduced demand for its scheduled services, although tour and charter services enjoy moderate growth. The bus is estimated to account for only 3% of intercity travel. However, bus services in many smaller towns and rural areas provide the only public transportation option to access regional commercial centres. Between major centres, buses often provide the lowest priced service. Surveys have shown industry clientele to be dominated by young and senior citizens of below average annual income and by those lacking access to an automobile.

For 1989 Statistics Canada reports an industry net income of \$14.5 million on revenues of \$ 362 million, excluding smaller carriers with operating revenue of under \$0.5 million. Greyhound dominates the industry, and it is estimated that Greyhound accounts for about half of industry revenues and some 80% of industry operating income. This leaves very little income for the remaining 22 carriers and supports industry complaints about losses and low rates of return.

The industry fears any regulatory change that would remove the present entry test of public convenience and necessity now applied in most jurisdictions. Concern is registered regarding the potential entry of lower-cost U.S. carriers into the transborder tour and charter market. However, New Brunswick and Prince Edward Island shifted to a reverse onus public interest entry test in 1988, without significant effect.

In the United States the intercity bus industry was deregulated in 1982. A recent study by the U.S. General Accounting Office²⁰ examines the continuing decline of that industry, which it attributes to diminishing demand, attractively priced airline competition and subsidized rail passenger services. This report notes that 20 states provide support for intercity bus services, primarily through operating support and subsidies for new buses. In addition federal funds allocated to states for transit activities may be employed to address intercity needs. Given the differing U.S. and Canadian approaches to intercity bus regulation, it would seem that the industry's future in North America may be more closely tied to passenger preferences and modal competition than to the extent of government regulation.

The chief industry concern, in Ontario and Quebec, apart from potential regulatory change, is the subsidized competition of VIA Rail services. Also identified is the lack of access to an effective regulatory process to address non-compensatory and/or predatory pricing issues. The underlying issue is the lack of clarity regarding federal passenger travel subsidy policies. This subject is dealt with extensively in the *Final Report of the Royal Commission on Passenger Transportation*. Failure to address this issue may result in the eventual withdrawal of long haul intercity bus services between major centres. This in turn may make it unprofitable for carriers to serve smaller centres lacking other service options.

SUMMARY

The trucking industry's prospects for a return to profitability and future growth, as the economy recovers, are good.²¹ As in the U.S., financial performance will likely never attain prederegulation levels, and the most successful carriers will be those that are soundly managed and constantly responsive to market demand.

Industry segments transporting heavy products in domestic markets will probably enjoy the greatest opportunity. Indeed, specialized carriers have always outperformed general commodity carriers. The market with the greatest growth potential will be the transborder trade. However, competition in this market will be intense. Canadian participation will, in the main, be confined to distances no greater than 500 to 800 miles into the U.S. from the Canadian border. To remain competitive in this market and to ensure the opportunity to complement transborder business with domestic U.S. traffic, Canadian carriers will likely continue to establish U.S. subsidiaries. The Canadian industry will be vulnerable to sudden changes in cost structure (e.g., fuel, taxation, etc.), which may precipitate a shift in the competitive balance between truck and intermodal services.

The industry will continue the trend toward larger carriers with broad geographic market territory.²² This will be accomplished through mergers and the more successful operators purchasing the assets and market share of the less successful. The number of transcontinental general commodity carriers will likely continue to decline. Rather than expand transcontinentally, general commodity carriers will tend to orient their market territory toward the north/south flow of goods.

While the industry as a whole may have a reasonably bright future, the various market forces and changing demand trends will continue to result in individual company failures. The survivors will be highly flexible, have a thorough understanding of cost structures and sound marketing expertise, and will employ available technology and human resource management techniques to optimize productivity and maintain customer service standards.

NOTES

- 1 Merrett, Mitchell, p.17.
- 2 Prentice, p.30.
- 3 *ibid.*, p.16.
- 4 John Heads, Barry Prentice, Mahlon Harvey, *The Transborder Competitiveness of Canadian Trucking*, Transport Institute, University of Manitoba, June 1991.
- 5 *ibid.*
- 6 Deloitte & Touche, *The Competitiveness of the Ontario Trucking Industry*, September 1991, Appendix E, provides results of a survey of Ontario and U.S. carriers examining productivity issues in five key management areas: Human Resources, Financial Planning and Management, Operations, Marketing and Equipment, and Systems.
- 7 Canadian Pacific Limited, 1991 Annual Report, p.47.
- 8 CIGGT, p.3.8.
- 9 PMS&K, Appendix B, which provides detailed commentary on emerging practices in logistics management.
- 10 Deloitte & Touche, p.68.
- 11 Merrett, Mitchell, p.17.
- 12 Bill Raney, *The Costs and Potential Savings of Empty Movements Occurring between Northern and Southern Ontario*, CTRF Proceedings 1988, p.353.
- 13 Review of Subsections 8(3) to 8(5) of the *Motor Vehicle Transport Act, 1987*, Report to Parliament TP 11283 E, Transport Canada, May 1992, pp.93-98.
- 14 Nix, Chapter 4 contains a detailed commentary on vehicle size and dimension anomalies.
- 15 Darcy B. Toms, *Success Strategies for Truckload Carriers*, CTRF Proceedings 1992, p.66.
- 16 Bill Raney et al. *Business Skills Requirements for Competitive Owner Operators*, CTRF Proceedings 1992, p.92.
- 17 *Load Broker/Owner-Operator Task force Final Report*, Canadian Council of Motor Transport Administrators, April 1992.

18 Heads et al., p.9.

19 PMS&K, Appendix B.

20 For a comprehensive commentary of the current status of bus service in the U.S., see United States General Accounting Office, Report to the Chairman, Surface Transportation Subcommittee, Committee on Commerce, Science, and Transportation, U.S. Senate, Availability of Intercity Bus Services Continues to Decline, GAO/RCED-92-126, June 1992.

21 CIGGT, p.6.2.

22 However, as in the past, some larger carriers (e.g., Route Canada, Glengarry Transport Limited) may be expected to fail.

4

Air Transport

Chapter 4 commences with a background statement on the current status of regulation of the Canadian airline industry. This is followed by a review of the experience of Canadian air carriers in the 1980s in terms of traffic, utilization of resources, yields earned and overall financial performance. The major concerns in airline transportation are then reviewed, focusing mainly on the financial condition of carriers and the state of competition in the industry. Northern air services are then addressed. The chapter concludes with a brief summary.

STATUS OF REGULATION

Domestic air service in southern Canada is no longer subject to economic regulation. Provided that a carrier is controlled by Canadians, there is freedom of entry on demonstration that the carrier is "fit, willing and able to provide the service." In broad terms, all that this implies is adequate insurance and a safety certificate from Transport Canada. Airlines can enter and leave markets with almost complete freedom, subject only to advance public notice of any intention to discontinue service. There is no control over rates in southern Canada. The National Transportation Agency can review, on complaint, increases in basic passenger fares on monopoly routes in southern Canada, but no action has been taken under this authority. The legislative framework for air transport flows from the *National Transportation Act, 1987*; however, this Act was only giving legislative confirmation to changes which had already occurred three years earlier, largely as a result of fall-out from deregulation in the United States.

In May 1984, the Canadian government issued its New Canadian Air Policy, which had the effect of deregulating domestic air transport in southern Canada. The explicit objectives of this policy were to provide consumers with a wide range of price-service options; to provide a stimulus to growth; to improve the airline industry's efficiency and productivity; to encourage innovation; and to counter the leakage of traffic to U.S. gateways. This reliance on competition rather than regulation in the domestic airline industry of southern Canada took effect very quickly after the May 1984 announcement. Unlike other areas of transportation, it is therefore necessary to carry the examination back to pre-1984 in order to assess the effects of economic regulatory reform on the Canadian airline industry.

Domestic air service to northern and remote communities is still subject to economic regulation because of the "fragile" nature of these markets. Under the 1987

legislation, the Agency must be satisfied that the new service will not “significantly decrease or destabilize existing air services in the area.” Any person or group can object to a proposed new licence, but the onus of proof that the licence would decrease or destabilize services rests with the objector. This is a significant relaxation of earlier conditions, when the new airline had to prove the need for its services. The Agency may still subject licences to conditions related to matters such as type of service, size of aircraft and the points served.

There is freedom of exit from northern and remote air services. Pricing regulation has been relaxed, but not to the same extent as in southern Canada. The Agency may still hear complaints about unreasonable passenger fare levels or increases and can order fare reductions and refund of excess charges. However, as indicated later in this chapter, the regulation of air service to northern and remote communities has not been stringent since 1987 and this market has been left to operate almost under unregulated conditions.

The regulation of international air services was not affected by the 1987 legislation, apart from a relaxation of requirements for international charter licences. Market entry and exit are still controlled through bilateral negotiations between Canada and foreign countries. Air fares are still subject to regulatory approval. Nevertheless, in practice the regulation of international air services has become much more relaxed and the conditions of bilateral agreements are becoming less confining. This was evident initially in less stringent pricing provisions in bilateral agreements between Canada and the United Kingdom and Canada and the Netherlands; there was then a significant step forward in the Canada-Germany agreement, which no longer requires carriers to agree in advance to discount sale prices; and more liberal pricing agreements have been reached in the last five years in five smaller markets — Argentina, Australia, Austria, Bulgaria and Greece. Carriers now have more freedom to set fares in accordance with their commercial interests.

In air transportation, the NTARC is charged with two tasks under section 266.(3)(e) and (f) of the *NTA, 1987*. The matters to be considered are:

- (e) the impact of this Act on air service in the various regions of Canada, particularly on routes having low traffic volume; and
- (f) the advisability of retaining or modifying the special economic regulation applicable to northern and remote area air services.

The chapter now proceeds to outline research findings relevant to the Commission’s mandate in airline transport. The reactions of travellers to changes in air services have already been summarized in Chapter 2. The quantity of service has increased. Discount fares are widely available and offer substantial savings on standard economy fares, although these developments had been fully implemented by 1988, some

four years after the de facto deregulation. Domestic air fares have risen significantly in real terms since 1988, although this trend has not affected international fares. Business travellers are not overly satisfied with changes in air services, but non-business travellers appreciate the savings from discount fares.

AIR CARRIERS IN THE 1980s

This section reviews the experience of Canadian air carriers in the 1980s in terms of traffic, utilization of resources, airline yields and overall financial performance.

Traffic

Airlines earn their revenue from the carriage of passengers and goods in scheduled and charter services. It is useful to start the discussion of traffic by identifying the relative importance of these sources of operating revenues. Figure 4.1 relates to Canadian Level I and Level II carriers, where these two levels cover all airlines whose annual traffic consisted of at least 50,000 revenue passengers or 10,000 tonnes of revenue goods. These carriers accounted for 90% of total Canadian airline operating revenues in 1990. The balance is accounted for by smaller operators, mainly serving northern or remote areas or involved in specialist air functions such as helicopter operations. The source of these data is *Canadian Civil Aviation*, SC 51-206.

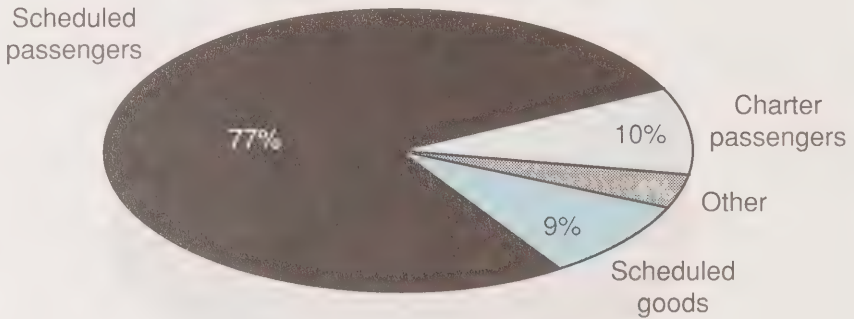
Scheduled passenger services are, of course, the most important revenue source for Canadian air carriers. Charter passengers provide 10% of revenues and scheduled goods services 9% of revenues. (The scheduled goods figure also includes charter goods services, but these are very small, providing only 0.5% of total revenues.) Charter operations are, of course, of much greater importance for smaller air carriers serving northern and remote areas or engaged in specialty activities, but these are not included in Figure 4.1. The remaining 4% of operating revenues come from miscellaneous activities.

Airline operations are dominated by Air Canada and Canadian Airlines International, whose parent company is PWA Corporation. In 1990, these two companies, together with their affiliates or "families," accounted for 90% of the total operating revenues of Level I and II carriers — 53% in the case of Air Canada and 37% in the case of Canadian Airlines International.¹ They accounted for 97% of scheduled passenger traffic and for about 90% of goods traffic. There was more competition in the charter passenger market, but even here Air Canada and Canadian International Airlines accounted for 27% of the market, with this figure not including all of the operations of their affiliates.

Scheduled air passenger traffic is shown in Figure 4.2 for the Air Canada and Canadian Airlines International families and their predecessor organizations. The data are from a special tabulation compiled by Statistics Canada for the NTARC. International traffic includes transborder operations.

Figure 4.1
Operating Revenues, 1990

Level I and Level II Canadian Air Carriers



Total: \$7,425 million

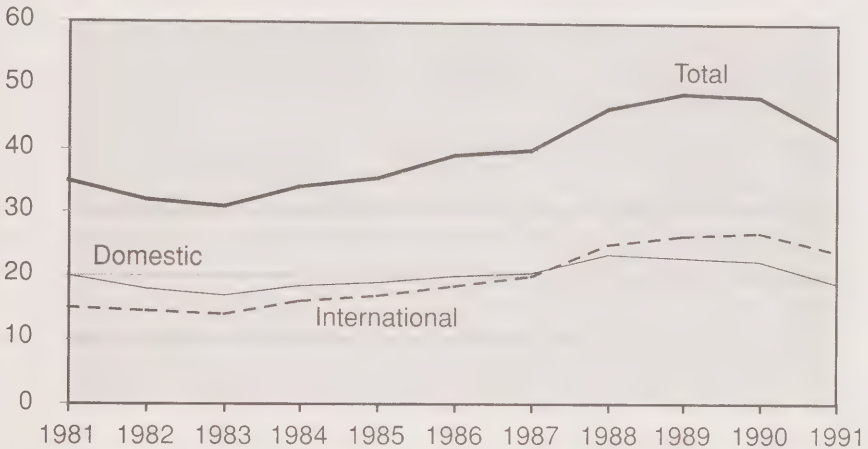
SOURCE: Statistics Canada.

Since the Second World War, there has been very rapid growth in the air transport industry, resulting from increased demand attributable to higher incomes and lower costs for airline travel related mainly to a formidable pace of technological innovation. This rapid growth continued into the decade 1971-81, when scheduled revenue passenger-kilometres in Canada increased by 131%. As Canadian air transport has become more extensive, inevitably growth in percentage terms has become less spectacular. In the decade 1981-91, passenger-kilometres increased by only 17%; even excluding the disastrous year 1991 for a 1981-90 comparison, the increase would still have been only 38%. Air transport in Canada is no longer enjoying the spectacular rates of growth of earlier decades.

Figure 4.2 shows that the early years of the 1980s were not kind to air traffic, as Canada struggled through an economic recession. The de facto deregulation of air transport in 1984 was followed by several years of increasing traffic. While this was partly due to the greater pricing freedom offered by deregulation, these were also good years for the economy as a whole. As the economy entered into recession at the end of the decade, the effects on the airline industry were very evident. The decline in output of 15% in 1991 was extremely severe and contrasts with a decline among U.S. carriers of little more than 2%. Preliminary figures for January/August 1992 show some recovery in Canadian air traffic, but only of the order of 4%.

Figure 4.2
Scheduled Air Passenger Traffic –
Air Canada and Canadian Airlines International

Revenue Passenger-kilometres in billions



SOURCE: Statistics Canada.

International and transborder passenger traffic was more buoyant than domestic traffic for Canadian scheduled air carriers. Figure 4.2 shows that domestic traffic was essentially stagnant; indeed, the depressed figure for 1991 was less than the traffic recorded in 1981. In the U.S., airline deregulation led to lower air fares and a large increase in traffic; in Canada, domestic air fares did not fall in real terms and it is therefore not surprising to find that traffic did not expand.

International air traffic continued to increase in the 1980s and international fares were declining in real terms. In spite of the large fall in traffic of 1991, international traffic still increased by nearly 50% in the decade 1981-91. In 1981, domestic traffic accounted for 57% of all revenue passenger-kilometres performed by Canadian scheduled air carriers. By 1991, this share had fallen to 46%. Canadian scheduled air carriers were relying increasingly on international and transborder traffic for any growth in total output.

As already indicated, the performance of Canadian air carriers in 1991 was much worse than that of U.S. carriers. The Gulf War affected both countries; the recession may have been a little more severe in Canada than in the U.S.; but perhaps the main explanation is the imposition of the Goods and Services Tax (GST) effective January 1, 1991. The GST is applied to domestic and transborder traffic carried by

Canadian airlines, but not to international traffic overseas. In addition, an Air Transportation Tax continues to be applied to all traffic.

Currently, the combined effect of these two taxes on domestic and transborder traffic is to add 20% to the price of a \$200 air ticket, 16% to the cost of a \$500 ticket, and 11% to the cost of a \$1,000 ticket.² Although the GST was accompanied by a reduction in the previously existing Air Transportation Tax, the net effect was to increase the taxes paid by Canadian domestic and transborder passengers by approximately 6%.³ The U.S. transportation tax for domestic and transborder air travel was increased on December 1, 1990, but by only 2%, leaving the total U.S. tax at 10% in contrast to the higher figures quoted above for Canada.

It is not only in respect of taxes paid by travellers that Canadian airlines are faced with a competitive disadvantage vis-à-vis U.S. airlines. Fuel taxes are also higher in Canada, and Sypher estimates that this cost Air Canada and Canadian Airlines International an additional \$154 million in 1991, which would be equivalent to 3% of operating revenues.

Higher taxes on Canadian air travel would in themselves have reduced demand. They also increased the diversion to U.S. carriers of both transborder traffic and domestic Canadian traffic originating from and destined for points near the U.S. border. This has been a long-standing problem for Canadian carriers and was one of the reasons for introducing the New Canadian Air Policy in 1984. For example, surveys in the lower mainland of British Columbia showed that this traffic diversion increased appreciably in 1991.

The provision of scheduled air passenger services in Canada is dominated by the duopoly of Air Canada and Canadian Airlines International, together with their affiliates. At the time of the de facto deregulation of 1984, Air Canada was pre-eminent in "the Canadian industry in terms of fleet size and makeup, domestic services, international routes, and financial strength."⁴ Today, the two companies compete in the classic fashion of duopolists, apart from their poor financial performance, which is examined later. In terms of fares, each company matches the other's fare adjustments and competitive discount fares. They match the timing of flights, frequent flyer programs and the amenities offered at terminals and on aircraft. There has been considerable price and service innovation since 1984, as the airlines have sought to differentiate their products and create brand loyalties in markets which are basically homogeneous. Fare reductions can be quickly matched by a competitor, service enhancements take a little longer, but it is not long before both carriers are also competitive in the service area.⁵

There has been little real competition to Air Canada and Canadian Airlines International in mainline scheduled passenger services. Two independent carriers, Intair and City-Express, ceased operations in 1991. However, Nationair is still offering competition on mainline scheduled services and appears to be making some impression on high density routes.

The discussion now turns to charter passenger carriers. Originally, the distinction between scheduled carriers and charter carriers was that the charter carrier sold the whole capacity of an aircraft to an affinity group or a wholesale travel agency, while the scheduled carrier sold seats to individual passengers. This distinction has become somewhat blurred over the years, especially after airline deregulation. Charter services are no longer confined to selling the whole capacity of an aircraft to one user and they are now competing by offering inexpensive one-way and return air fares with flexible return dates, lower fares for children and senior citizens, and last minute reservations.

Figure 4.1 showed passenger charters as accounting for 10% of the total revenues of Canadian Level I and II air carriers in 1990. Charter operations have always been more important in transborder and international travel than in the domestic movements within Canada. In 1990, charters accounted for 6% of total passengers moved on domestic flights within Canada. However, some of these charters were operated by the Air Canada and Canadian Airlines International families, so that the independent operator share of the domestic market was under this 6% figure.

In the early years after deregulation, it looked as if charter carriers might disappear. Wardair was merged into Canadian Airlines International in 1989. In 1990 there was a formidable list of failures of air charter carriers — Points of Call, Vacationair, Crownair, Odyssey International (together with its parent company, Soundair, and its sister companies) and Worldways Canada. Nevertheless, surviving charter operators were able to react to this market void and Canadian charter carrier capacity in terms of seats at end-1990 was still about 85% of what it had been at the end of 1989.⁶

The major charter carriers now operating are Nationair, Canada 3000 and Air Transat, with First Air still operating an Ottawa-Montreal service but concentrating mainly on northern Canada. In 1991, charter operators provided competitive service on 14 domestic city-pairs in the peak summer travel months and served six of these city-pairs on a year round basis. For the year as a whole, they provided about 5% of the total available seats in links between Toronto and 10 other cities. Air Canada and Canadian Airlines International have also been forced to discount fares more in markets where the charter carriers are active than in those where they are not present.⁷ In terms of revenue passenger-kilometres, it has been estimated that in 1991 the independent charter carriers operating on domestic Canadian movements had traffic equivalent to 2.8% of that carried by Air Canada and Canadian Airlines International together. This was an increase from 2.1% in 1990.⁸ Charter carriers are therefore providing some competition to Air Canada and Canadian Airlines International, but this is still quantitatively small.

As seen in Figure 4.1, goods traffic accounted for 9% of the operating revenues of Level I and II Canadian air carriers in 1990. The proportion was slightly higher for Air Canada than for Canadian Airlines International, but the difference was not substantial. As a result of the recession, air cargo has been depressed over the last two years. The

NTARC heard relatively little about air cargo in submissions from shippers and carriers, although there were some complaints on the availability of cargo space on smaller feeder aircraft.

Utilization of Resources

Employment in the Canadian airline industry was 60,000 in April/June 1992. In addition to air carrier employees, this figure included some 6,000 jobs in activities incidental to air transport. Employment in the air industry had fluctuated considerably in the 1980s, falling during the recession at the beginning of the decade, rising quite strongly from 1984 to 1990, and then falling back with the reduced activity of 1991. Adjusting for changes in the definitions used by Statistics Canada, total employment in April/June 1992 was perhaps 7% higher than in 1981.

Canadian airlines are now cutting employment in the face of reduced demand, but it has been suggested that this process has been slow.⁹

Despite early warning signs, it was not until the Level I air carriers began to experience severe financial difficulty that they began to reduce staff. Since 1989, Air Canada and Canadian have laid off 1,900 employees and Air Canada announced in July of 1992 that it was planning to lay off another 1,800. Severe labour reductions are also occurring around the world in both highly deregulated markets like the U.S. and highly regulated markets such as France, Germany, the U.K. and Australia.

Average weekly earnings in air transport were \$801 in April/June 1992 (Figure 2.7 of Chapter 2). This is appreciably higher than the transport sector as a whole, but air transport earnings have been losing ground vis-à-vis the railway transport industry. Air transport was formerly the best paid mode, but rail has now drawn ahead. Real earnings in air transport fell by about 6% between 1981 and April/June 1992.¹⁰

Considering the period from 1981 to mid-1992, Canadian airline traffic in terms of scheduled passenger-kilometres increased by approximately 22%. The labour force increased by 7% in this period, thus implying a rise in labour productivity of 14%. With a reduction in real labour earnings of approximately 6%, the labour cost of producing output had fallen 21% in real terms. However, very little of this productivity increase occurred in the later years of the decade and, throughout the period, the connector lines in the Air Canada and Canadian Airlines International families showed more progress than the mainline operations.

Airline consumption of fuel also declined relative to output over the decade 1981-91. In 1991, Canadian airlines were achieving in excess of 1.8 revenue tonne-kilometres per litre of fuel and this was an improvement of over 20% on the situation at the beginning of the decade. This improvement may have been partly due to airlines using their aircraft more efficiently, but the main explanation is technological innovation

with new aircraft much more fuel efficient than those which were being replaced.¹¹ Fuel prices are, of course, subject to considerable fluctuation; there was a very large increase as a result of the Gulf War in late 1990 and early 1991, but prices have since fallen back to pre-war levels. In general, fuel prices in the latter part of the 1980s do not seem to have increased much in real terms. The major part of the improvement in fuel productivity should therefore have been passed through in terms of fuel costs per unit of output.

The cost item which has increased substantially is aircraft possession costs. The purchase of new equipment has been very expensive, and it has been estimated that aircraft possession costs for scheduled Canadian carriers operating jet aircraft increased from \$315 million in 1981 to \$836 million in 1991.¹² Although these figures are in current dollars, a correction for inflation still shows a rise in aircraft possession costs of almost 60% in real terms over the decade 1981-91. Against an output increase of 22% from 1981 to mid-1992, the burden of aircraft possession costs per unit of output has increased steeply. Moreover, when traffic falls substantially as in 1991, the airlines still have to bear the bulk of these aircraft possession costs.

To summarize this discussion, the costs of providing airline output have not declined very substantially in the 1980s, especially in the latter years of the decade when there were heavy purchases of new equipment. Improvements in labour and fuel productivity were partly the result of this new equipment, but the economies on labour and fuel were largely cancelled out by increased aircraft possession costs.

The effects of these developments on operating expenses in relation to traffic are predictable. Calculations produced by Sypher show operating expenses per revenue tonne-kilometre (RTK) of \$0.951 for Air Canada in 1991 and \$0.967 for Canadian Airlines International in that year.¹³ For Air Canada, operating expenses per RTK fell 9% in real terms over the decade 1981-91. However, the lowest figure was recorded in 1988 and operating costs per RTK in real terms increased by 10% in the period 1988-91. Canadian Airlines International did not exist in 1981 and Sypher could therefore only make definite calculations for recent years. Between 1988 and 1991, Canadian Airlines International operating expenses per RTK increased by 4%. This increase was less than for Air Canada, but Air Canada was the lower cost carrier throughout the period 1987-91, particularly in the earlier years of this period.

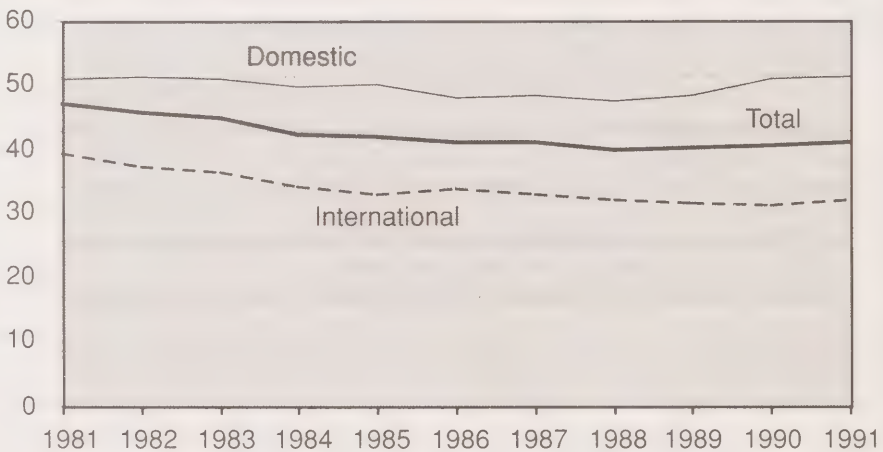
Prior to the formation of Canadian Airlines International, CP Air and Wardair were lower cost carriers than Air Canada, but this was not true of the former regional carriers, which were absorbed into Canadian Airlines International. An attempt was made to compare Canadian Airlines International's operating expenses per RTK in 1991 with the combined figure for its predecessor airlines, calculated in accordance with their respective outputs of RTK in 1981. In real terms, operating expenses per RTK for Canadian Airlines International in 1991 were precisely the same as for its predecessor organizations in 1981. In other words, Canadian Airlines International had not enjoyed any reduction in the real costs of producing its output over the decade.

Airline Yields

Figure 4.3 presents airline yields for scheduled passenger services in terms of cents per passenger-kilometre. The coverage is the Air Canada and Canadian Airlines International families, and the relevant data were calculated by Statistics Canada in a special tabulation requested by the NTARC. The yields were then expressed in real terms of 1986 cents to adjust for inflationary changes, using the Consumer Price Index as the deflator.

Figure 4.3
Yield on Scheduled Air Passenger Services

Real Terms: Cents per Passenger-kilometre (1986 cents)



SOURCE: Statistics Canada.

The average yield of the airlines has been declining in real terms for many years, partly reflecting the cost reductions achieved by technological innovation. The yield declined in the 1970s and this continued until 1988, but it has since increased. There is no evidence to suggest that the yield has been affected by the de facto deregulation of 1984. Looking at the decade as a whole, the average yield was 12% lower in real terms in 1991 than in 1981.

The developments shown in Figure 4.3 have not been the same for domestic traffic as for international traffic. The domestic yield showed only a modest fall over the period 1981-88 with its lowest figure in 1988, when Air Canada, Canadian Airlines International and Wardair were competing aggressively for domestic traffic. The domestic yield has been rising since 1988 and in real terms this yield was 10.5% higher in 1991

than in 1988. In fact, the real return on domestic traffic was higher in 1991 than a decade ago in 1981.

The pattern on international yields has been very different. These yields are driven by competition from non-Canadian carriers and have fallen almost every year until the increase which occurred in 1991. Because of longer length of haul and larger plane sizes, the international yield has always been less than that on domestic flights. This gap is becoming larger and by 1991 the international yield had fallen to 61% of the domestic yield.

FINANCIAL PERFORMANCE

Table 4.1 shows the operating ratios of Canadian air carriers in recent years. The operating ratio expresses operating expenses as a percentage of operating revenues, so that the lower is the operating ratio the more favourable this is to the carrier.

Table 4.1
Operating Ratios of Canadian Air Carriers

	Operating Revenues (\$mn)	Operating Expenses (\$mn)	Operating Ratio (%)
1987	6,274	5,911	94.2
1988	7,136	6,873	96.3
1989	7,861	7,768	98.8
1990	8,240	8,239	100.0
1991	7,601	7,855	103.3

Source: Statistics Canada 51-206 for all carriers, Levels I-IV.

The operating ratio of Canadian air carriers was reasonably satisfactory in 1987. The ratio has since deteriorated, so that by 1990 operating expenses absorbed virtually the whole of operating revenues. On preliminary figures for 1991, the operating ratio has deteriorated to 103.3. In other words, expenses were substantially ahead of revenues and, far from there being a return on capital, the value of the owners' equity was being bled away in order to keep the airlines operating.

The results of these adverse operating ratios can, of course, be seen in the net income figures of the carriers. These are shown from the consolidated accounts of Air Canada and PWA Corporation in Table 4.2. The figures for Canadian Airlines International cover all the activities of affiliates and Air Canada covers most of its affiliates.

Table 4.2
Net Income (Loss) in \$ Million

	Air Canada	Canadian Airlines International	Total
1988	89	30	119
1989	149	(56)	93
1990	(74)	(15)	(89)
1991	(218)	(162)	(380)
1992 (9 months)	(307)	(106)	(413)

Source: NTA *Annual Review 1991*, pp.46-7 and newspaper figures for 1992.

Air Canada has been in a loss situation for three years and Canadian Airlines International for four years. In 1991, the loss for Air Canada was equivalent to 6.1% of operating revenues, with a corresponding figure of 5.6% for Canadian Airlines International. Separation costs for staff reduction were included in the loss, but were only modest in amount in 1991 — \$36 million for Air Canada and \$22 million for Canadian Airlines International. The total net loss in 1992 will be substantially higher than the very large figure recorded in 1991.

Airlines in Canada have never been well capitalized.¹⁴ The financial situation was not very healthy prior to the de facto deregulation of May 1984, in spite of recapitalizations undertaken for Air Canada, CP Air and Pacific Western in the late 1970s and early 1980s.

As of December 31, 1983, the four major Canadian airlines — Air Canada, CP Air, PWA and Wardair — had a debt/equity ratio of 68/32, i.e., twice as much debt as equity. The working capital balance of this group of carriers was substantially negative, equivalent to over one-third of shareholders' equity. Cash and short-term investments were low. Wardair was in a particularly bad way, with a shareholders' equity that was negative.

Nevertheless, at end-1983 there did not seem to be any strong concern regarding the inadequate capitalization of the airline industry. Air Canada dominated the industry; it was a Crown Corporation with access to government funding. CP Air was owned by Canadian Pacific Limited, Canada's largest conglomerate, and its balance sheet had recently been strengthened by the parent company. PWA had been privatized by the Government of Alberta and was earning modest profits. Regulation still gave some protection to airline revenues and investors were not overly alarmed at modest returns because they thought that they had invested in a growth industry.

In May 1984, the Minister of Transport issued the New Canadian Air Policy, which set the framework for domestic deregulation. The 1984-87 period was characterized by relatively high levels of profit performance in the airline industry. Canadian Airlines International was formed by the PWA Corporation through the integration of CP Air, PWA, Nordair and Eastern Provincial. Air Canada was still a Crown Corporation. Air Canada and Canadian Airlines International had commenced the acquisition of connector airlines which would form parts of their "families." Wardair aggressively entered the scheduled side of the business.

Both PWA and Wardair were able to raise new equity through the sale of shares. By the end of 1987, the Level I carriers had positive working capital and had substantially improved their situation on cash and short-term investments. Nevertheless, long-term debt had increased as well as equity. At December 31, 1987, the debt/equity ratio of 68/32 was exactly the same as at December 31, 1983.

The privatization of Air Canada began in 1988. At first, this seemed to be very successful and the company had record net income in 1988, followed by even larger net income in 1989. The partial privatization and the strong profit performance both increased Air Canada's equity and the financial situation at December 31, 1989 was very healthy with the debt/equity ratio down to 59/41.

Canadian Airlines International was less successful. Net income was reasonable in 1988, but the company lost money in 1989. Canadian Airlines International was expanding aggressively in order to fight the market leadership of Air Canada and this included the purchase of Wardair in 1989. This was a costly purchase — \$146 million in cash, \$105 million in PWA common stock and the assumption of over \$300 million of Wardair debentures. Rapid expansion and the net loss of 1989 had their effects on the Canadian Airlines International balance sheet. At December 31, 1989, the company had a large negative working capital balance, smaller reserves in cash and short-term investments and a debt/equity ratio of 70/30. This deterioration in the balance sheet of Canadian Airlines International cancelled out much of the improvement of Air Canada and the Level I carriers as a whole had a debt/equity ratio of 66/34 at December 31, 1989, which was only a slight improvement on the position at end-1987.

The years since 1990 have been described as "the industry crisis." As shown earlier in Table 4.2, both Level I airlines had modest losses in 1990, very large losses in 1991 and even larger losses in 1992. By December 31, 1991, the Level I airline carriers had negative working capital, much lower cash and short-term investments than at the end of 1989, and a debt/equity ratio of 77/23. With the continuing heavy losses of 1992, there has been further substantial deterioration in the precarious financial situation.

In the good years of 1988-89, Air Canada made the decision to buy large numbers of new aircraft. In the nature of the airline business, management has to make commitments to purchase aircraft to be utilized over a 15-year time period and these decisions are inevitably risky. If Air Canada were to compete effectively, it had to replace the aging B-727s that formed the backbone of its medium range fleet. Canadian Airlines

International had enjoyed reasonable profit in the years 1986-88 (although 1989 was not a good year for Canadian Airlines International), and it had also made decisions to purchase substantial numbers of new aircraft. If it were to compete at all with Air Canada, Canadian Airlines International had to buy medium range fleet — its main predecessor company, CP Air, had no aircraft in this category in 1984.

Although both companies took some delivery of new aircraft in 1988-89, this was not sufficient to have had substantial effects on the balance sheets. Of more importance were the commitments to buy new equipment. At the end of 1989, Air Canada was committed to a \$3.8 billion fleet renewal/expansion program, with 47 aircraft due to be delivered over 1990-94 and options on a further 36 aircraft. Canadian Airlines International placed firm orders in 1988 for \$1.6 billion of new aircraft to be delivered in 1989-94, together with commitments for eight more aircraft on operating leases and options on a further 52 aircraft.

Both airlines have taken substantial deliveries of new equipment during the recession from 1990 to date. Some of this equipment was initially placed in storage as surplus to demand, although most of this equipment is now in use. As of end-1991, Air Canada still had commitments for new aircraft of \$1.4 billion and Canadian Airlines International for \$0.9 billion. Airlines in Canada were far from alone in ordering vast quantities of new aircraft in the 1988-89 boom period. However, with the subsequent economic downturn, these heavy equipment orders have proved to be a considerable cause of the present financial problems of Air Canada and Canadian Airlines International. As Sypher concluded in their research for the NTARC:

economic regulatory reform (ERR) did not cause the current state of the industry. The airlines were poorly capitalized at the outset of ERR and subsequently undertook expansion and reequipment programs which have left the industry with an excess of capacity of 15%-25% and a burden of debt that may be insurmountable. In short, the airlines put themselves in their current position. Nonetheless, the government is being presented with a problem that has no easy solution.¹⁵

Northern Air Services

The *NTA, 1987* provides for continued regulatory control over northern and remote air services. However, the regulation administered by the Agency since 1988 has been extremely light. From the beginning of 1988 to May 1992, 209 objections had been filed with the Agency in respect of licence applications for northern and remote air services. Licences were denied in only two cases. Five complaints in respect of unreasonable fares were filed; in all cases, the Agency found the fares to be reasonable.¹⁶

Northern air services are provided by three groups of carriers — the Air Canada family, the Canadian family and independents. Of the independents, First Air and Air Inuit are both owned by the Makivik Corporation and now code-share under First

Figure 4.4
Scheduled Carriers Serving the North, 1991

Carrier	Northern Network	Fleet
Air Canada Family		
Air BC	3 pts. in north Alta. & B.C.	5 jets, 30 non-jets
Air Alliance	4 pts. in north Que. & Nfld.	15 non-jets
Air Nova	3 pts. in north Que. & Nfld.	5 jets, 9 non-jets
NWT Air	5 pts. in the N.W.T.	2 jets, 1 non-jet
Aklak Air	6 pts. in the N.W.T.	13 non-jets
Air Tindi	3 pts. in the N.W.T.	7 non-jets
Buffalo Airways	3 pts. in the N.W.T.	4 non-jets
Northernwestern Air Lease	6 pts. in north Alta., Sask. & the N.W.T.	6 non-jets
Simpson Air	3 pts. in the N.W.T.	7 non-jets
Canadian		
Air Atlantic	3 pts. in north Nfld.	3 jets, 13 non-jets
Calm Air	20 pts. in north Man. & the N.W.T.	8 non jets
Canadian North	18 pts. in north Man., Alta., Que., N.W.T. & Yukon	8 jets
Inter-Canadien	14 pts. in north Que. & Nfld.	12 non-jets
Ontario Express	5 pts. in north Ontario	26 non-jets
Time Air	12 pts. in north B.C., Alta., Sask. & Yukon	7 jets, 29 non-jets
Independents		
Air Inuit	17 pts. in north Que. & the N.W.T.	9 non-jets
First Air	22 pts. in north Que., Nfld. & the N.W.T.	4 jets, 21 non-jets
Air Manitoba	9 pts. in north Man. & Ont.	19 non-jets

SOURCE: National Transportation Agency

Air's name. Figure 4.4. is taken from the National Transportation Agency, *Annual Review 1991*, p. 49 and gives a useful list of the northern networks.

The level of service in the North has increased substantially since 1987, apart from the decline in 1991 which affected all sectors of the airline industry. As in southern Canada, northern fare levels have increased in real terms since 1988. The 1991 Northern Air Survey, conducted by the Agency, reported that 68% of respondents had no opinion on the effectiveness of the "reverse onus" market entry test, that 12% thought it had been effective and that 20% thought that it had not. Including the responses to other questions on this survey, there appear to be more respondents wanting to retain rather than eliminate northern airline regulation, but there were substantial numbers of respondents who had no opinion on the issue.¹⁷

SUMMARY

1. Domestic air service in southern Canada was de facto deregulated in 1984 and this was confirmed in the 1987 legislation. There is still economic regulation of domestic air service for northern and remote communities, but in practice these markets have also been left to operate under virtually unregulated conditions.

International air services are still controlled through bilateral negotiations between Canada and foreign countries, but the conditions of these agreements are becoming less stringent.

2. The rate of increase in airline traffic was much slower in the 1980s than in earlier decades. Traffic fell substantially in 1991 as a result of the GST, the recession and the Gulf War. With a slight recovery in traffic in 1992, scheduled airline activity in mid-1992 was some 22% higher than in 1981. The increase in traffic was confined to the international sector, and domestic traffic within Canada has been stagnant for most of the last 10 years.
3. Labour and fuel costs per unit of airline output have each fallen about 20% over the last decade. However, this has been largely due to technological change, which in its turn has caused a large increase in aircraft possession costs. In real terms, operating costs per unit of output fell by about 9% for Air Canada in the decade 1981-91. There seems to have been no change in the real level of operating costs per unit of output for the Canadian Airlines International family, as compared with its predecessor companies.
4. Airline yields fell 12% in real terms during the decade 1981-91. This decline in yield was confined to international traffic. After an initial decline, the domestic yield increased appreciably from 1988 to 1991 and was slightly higher in 1991 than in 1981.
5. The financial performance of Canadian airlines has deteriorated since 1989. There was a record loss in 1991 and this is even worse in 1992. Financial difficulties have also occurred in other parts of the world in both regulated and unregulated airline industries.
6. The combined balance sheets of Canadian Level 1 carriers were unsatisfactory before deregulation and at end-1983 debt was more than double equity. With minor changes, this condition continued until end-1989. Since then, debt/equity ratios have deteriorated considerably as a result of the large losses experienced by the carriers. Heavy re-equipment costs have substantially added to the problem. Carriers have had to replace their aged fleets of medium range aircraft with new equipment; however, new equipment ordered in the good years of 1988 and 1989 has arrived during the current recession and there is over-capacity for present traffic levels.
7. Northern air services have not really been regulated since 1987. The market is dominated by three players — the Air Canada family, the Canadian Airlines International family and First Air/Air Inuit.

NOTES

- 1 These calculations are from data in National Transportation Agency, *Annual Review 1991*, pp.46-7.
- 2 The material in this and the next two paragraphs is taken from Sypher, *Major Canadian Airlines*, pp.70-4 and p.83. The full reference to Sypher is contained in Appendix 1.
- 3 While the airlines now claim a refund from government of GST paid on their inputs and this was not possible under the previous Manufacturers' Sales Tax, relatively few airline inputs are subject to GST and hence the savings to be made here are limited.
- 4 Sypher, *op. cit.*, p.36 and for fuller discussion, pp.35-44.
- 5 For a useful discussion of these issues, see National Transportation Agency, *Annual Review 1991*, pp.42-4.
- 6 National Transportation Agency, *Annual Review 1990*, p.22.
- 7 National Transportation Agency, *Annual Review 1991*, p.44.
- 8 Sypher, *op. cit.*, p.75.
- 9 *ibid.*, p.24.
- 10 Average weekly earnings are from SC 72-002 and these are deflated by the Consumer Price Index in SC 62-010. However, because of definitional changes in SC 72-002, the calculation of the change in real wages can only be approximate.
- 11 Sypher, *op. cit.*, pp.21-2.
- 12 *ibid.*, Appendix E, p.4. The series of aircraft possession costs relates to costs of owning the fleet and not to the actual purchases of new aircraft each year. The series is therefore not subject to random year-to-year fluctuations and a comparison of 1991 against 1981 is legitimate.
- 13 All calculations in this and the next paragraph are based on Sypher, *op. cit.*, Appendix C. The estimate of operating expenses per RTK for Canadian Airlines International predecessor companies in 1981 was made by the NTARC staff, using Sypher data.
- 14 The financial analysis in this section is taken from Sypher, *op. cit.*, Chapter V, pp.45-58.
- 15 *ibid.*, p.145.

16 National Transportation Agency Staff Report, *Air Services*, May 1992, p.9.

17 National Transportation Agency, *Annual Review 1991*, p.53.

5

Railway Transport

Chapter 5 commences with a background statement on the current status of regulation of the Canadian railway industry. This is followed by a review of the experience of Canadian rail carriers in the 1980s in terms of competitive pressures, traffic and utilization of resources. Recent railway financial performance is then examined and the prospects for future viability are addressed. A short note on railway passenger transport is presented. The chapter concludes with a brief summary.

STATUS OF REGULATION

The thrust of transport deregulation in the highway and air modes was to allow carriers to operate more freely in a competitive environment. In the rail mode, the main impact was to enable shippers to bargain more effectively with the railways, and the *NTA, 1987* was regarded at the time as very much "a shipper's act."¹ The legislation covered over 90% of Canadian railway operations.²

The most important innovation of the *NTA, 1987* has proved to be the introduction of confidential contracts governing the rates and conditions for movements of goods. Following the practice introduced in the United States in 1980, a shipper and a carrier are allowed to sign a confidential contract to fit the particular circumstances of a movement of freight without having to disclose this information. Prior to this, all charges for the movement of freight were in the public domain and any charge negotiated by one shipper was available to other shippers able to offer traffic under similar conditions. The *NTA, 1987* also abolished collective rate-making and the exchange of cost information between railways, which had been legal before the new legislation.

The *NTA, 1987* introduced competitive access provisions to allow shippers to have access to more than one rail carrier. This action was taken along two fronts. With respect to shippers located mainly in urban areas, there are prescribed rates for the transfer of rail cars from one railway to another railway within a prescribed distance of an interchange. The new legislation extended the limits to which these interswitching arrangements apply from 6.4 kilometres to 30 kilometres. For shippers who were still outside interswitching limits, the *NTA, 1987* introduced competitive line rates. A shipper located on one rail line may ask that railway to establish a competitive line rate for moving goods along the line on which he is captive for interchange to a competing carrier's line. The shipper must have the agreement of the competing carrier before requesting the competitive line rate. If such a rate cannot be satisfactorily negotiated, the shipper may ask the Agency to set a rate according to the guidelines contained in the legislation.

The *NTA, 1987* introduced provisions to simplify dispute resolution between shippers and carriers, while leaving as much initiative as possible to the parties concerned to arrive at an acceptable solution. Mediation services existed on an informal basis prior to 1987, but these now exist in a more formal fashion, subject to the agreement of all parties concerned. Although no dispute has yet been referred to the Agency for mediation, the usefulness of the procedure is not contested. Final Offer Arbitration was a new procedure introduced in 1987 for all freight transport modes under federal jurisdiction. In a dispute between a shipper and a carrier, each party makes a final offer in the arbitration process; the arbitrator must choose either the shipper's offer or the carrier's offer and has no power to propose any intermediate offer; and the decision is binding. The Agency can also investigate disputes that have a broad public interest impact, but this provision also existed prior to 1987.

With respect to rail plant rationalization, the *NTA, 1987* introduced several new provisions aimed at streamlining the abandonment process and allowing the sale of rail lines to qualified companies who wish to operate short lines. The effectiveness of these new rules has been somewhat limited over the five years in which the Act has been in effect. First, railway companies were not allowed to abandon more than 4% of their total route mileage in any one year prior to 1993. Second, almost all the branchline network in the prairies continued to be frozen by Order-in-Council until the year 2000.

The NTARC is charged with considering four railway matters under section 266.(3)(b), (c), (d) and (j) of the *NTA, 1987*. These are quoted below:

- (b) the effect of confidential contracts for the transport of rail freight on shippers, and on the efficiency of the rail transportation system in the various regions of Canada;*
- (c) the advisability and necessity of having a compensatory rate requirement with respect to railway transportation;*
- (d) the extent to which competitive access to railway transportation has been achieved by shippers in the various regions of Canada;*
- (j) the effect of sections 134 to 142 on the revenues, financial viability, capital investment and service levels of railway companies.*

However, these matters have already been considered in Volume I and are therefore not addressed specifically in the present chapter.³

RAILWAY CARRIERS IN THE 1980s

The Canadian railway network comprises 25 railway companies and serves eight provinces. Sixteen of these railway companies are under federal jurisdiction; these

include CN, CP, VIA Rail, six U.S. railroads serving Canada, and seven smaller Canadian railways. The nine other railways are under provincial jurisdiction and therefore not affected by the NTAR 1987. Freight services are offered on a commercial basis, although certain non-profitable freight services and all passenger services are provided on the basis of public policies and supported out of public funds.

Although the rail network is equivalent in kilometres to only 25% of the highway system, most major commercial, industrial or resource exploitation areas are served by rail. Intermodal services and connections extend rail freight services to all provinces and territories. In addition to the U.S. railroads operating connecting services to Canada, Canadian railways also provide continuous routes from any point served in Canada to any point in North America through interchange agreements with other railways, which allow the movement of one railway's freight cars over the lines of other railways on a single rate from origin to destination. There are rail connections between Canada and the United States in every province from New Brunswick to British Columbia and these serve key industrial centres in southern Canada.

CN and CP play the major role in the Canadian rail industry; their networks include 89% of main and secondary lines in Canada and handle a similar proportion of the rail freight traffic. They are also the only railways offering transcontinental services on the same railway in North America. CN and CP also own subsidiaries serving the north-east and mid-west of the United States and have been actively restructuring their operations to respond to the continentalization of trade partners.⁴ The other Canadian railways mainly serve local shippers and constitute feeder services to CN and/or CP lines.

The rail mode is the only mode of transport where operators also own the infrastructure on which their vehicles move and control the movements on their respective networks. Railway revenues must generate sufficient funds to build and maintain tracks, bridges and other fixed plants used for the movement of trains. This results in a high level of fixed costs in relation to total costs. Decisions concerning entry into new markets or market development must take into consideration long term trends of such markets, increasing the risk factor of these decisions. For the same reasons, railways cannot adjust quickly to market shifts. For instance, the Canadian rail network is oriented in an east-west direction, while trade is tending to reorient itself north-south following the Canada-US Trade Agreement and, more recently, the NAFTA.

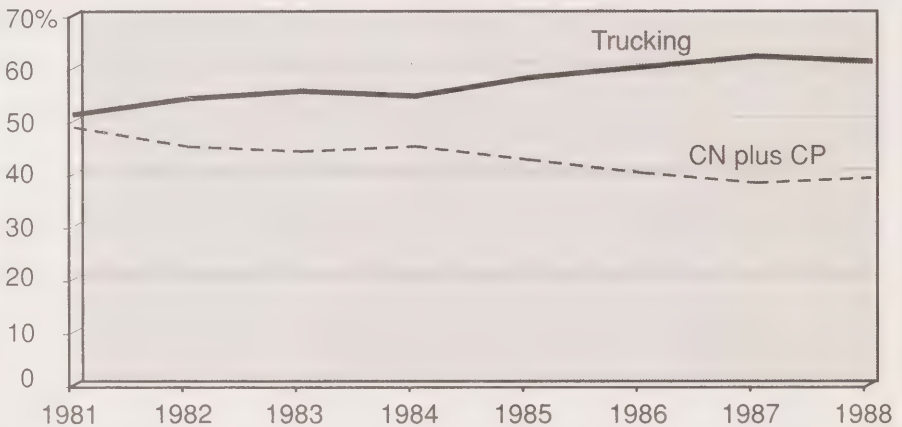
Competitive Pressures Before 1987

Canadian railways were already under intensive competitive pressures by 1987. This competition came from the trucking industry in Canada and from U.S. railroads.

Figure 5.1 is taken from the IBI study undertaken for the NTARC (where it appears as Exhibit 4.2). IBI estimated the total domestic tonnage moved by the Class I railways — CN and CP — and the major for-hire and private trucking firms in Canada over the period 1981-88. The calculations excluded traffic moving less than 100 miles and all grain and coal tonnage "to produce a measure of the competitive marketplace."

(IBI, p.30) The estimates of tonnage moved were then converted to a market share basis. While Figure 5.1 does not cover all surface land freight traffic, it does show that the railways were losing ground to the trucking industry in markets where the two modes were competitive.

Figure 5.1
Market Shares of Domestic Tonnage



NOTE: Rail traffic excludes grain and coal traffic and traffic moving less than 100 miles.
Trucking includes the traffic of For-Hire Class I and II and major private trucking firms.
SOURCE: IBI

The competition from U.S. railroads was also affecting Canadian railways before 1987, and the introduction of confidential contracts was partly to fight this U.S. competition. The *Staggers Rail Act* of 1980 reformed the U.S. economic regulation of railways and gave U.S. railways greater management freedom in rate-making and plant rationalization. Since 25% of CN revenues and 22% of CP revenues at that time came from transborder traffic, it became apparent that the competitive position of Canadian railways was seriously endangered. In 1984, the Railway Transport Committee of the then Canadian Transport Commission began an inquiry into the effects in Canada of U.S. rail deregulation. The final staff report to this inquiry states:⁵

That certain effects on railways at least may be reasonably attributed to Staggers. While overall tonnages in domestic and U.S.-destined traffic show fluctuations reasonably attributable to changes in economy, overhead

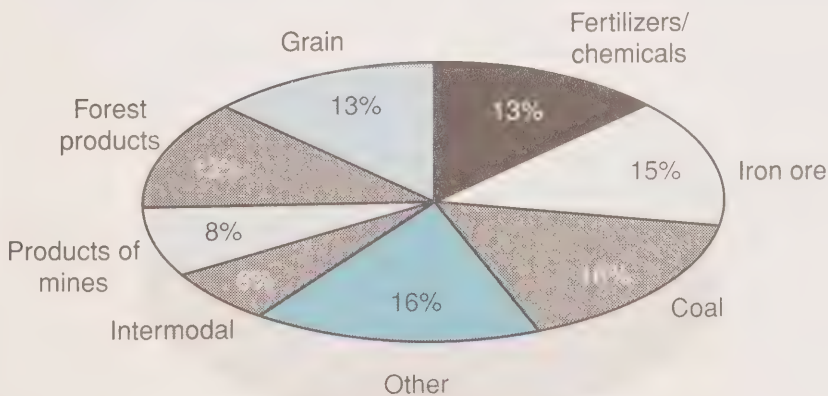
traffic shows a marked decline without recovery. This contrast would indicate that different factors affect overhead traffic. Legislative differences post-Staggers may be one such factor....

Most shippers and shipper organizations indicated during this inquiry that advantages could be gained by resorting to U.S. railroads at the nearest border point and that traffic moving under confidential contracts on U.S. railroads often benefitted from rate rebates or allowances. This improved Canadian shippers' competitive position vis-à-vis their U.S. or offshore competitors in the U.S. market. Although total revenue loss was not established with certainty, CN and CP provided evidence of specific movements lost to U.S. railroads as a result of the new competitive ability of their counterparts across the border.

Traffic

Like any other industry, the output of Canadian railways fluctuates from year to year depending upon the general state of the economy. Taking a long view over the years 1980-91, railway freight output increased by roughly 1% per annum, with this measured

Figure 5.2
Commodity % Shares of Canadian Rail Tonnage: 1990



SOURCE: Statistics Canada

in terms of revenue tonne-kilometres of traffic carried. While the increase in work performed was less impressive in the 1980s than in previous decades and the trucking industry continued to make incursions into rail traffic in manufactured goods, nevertheless the volume of work performed was still increasing. As already indicated, CN and CP dominate rail freight traffic in Canada and there was only negligible difference between the two companies in terms of traffic increase and, generally, on most other performance measures.

The traffic carried by the Canadian railways is mainly bulk products, as illustrated in Figure 5.2.⁶ These accounted for over three-quarters of the tonnage moved in 1990.

Utilization of Resources

The most striking aspect of railway operations in the 1980s was that a modest increase in output was achieved with a vast reduction in the resources used. Railway employment in Canada fell dramatically. CN employment at 31,900 in 1991 was 44% less than in 1981; CP employment at 22,000 showed a fall of 35%. However, the number of employees of U.S. Class 1 railroads fell by over 50% in this period; in addition, employment compensation still represents 40% of operating expenses of Canadian railways against a 28% share of U.S. railroads. The decline in Canadian railway employment was fairly continuous throughout the past decade and there is no evidence to suggest that the NTA, 1987 has affected employment trends in either railway.

The railways have paid a heavy cost in buying out surplus employees through job security packages and we return to this subject later. The average weekly earnings of those railway employees who remained have not been adversely affected by the reduced level of employment. In April/June 1992, average weekly earnings in the railway industry were \$841 and these were the highest of all major transport sectors. Moreover, although the rise in average weekly earnings has been modest in real terms at 0.9% per annum over the period 1987-91, this was a higher increase than for most other transport sectors and slightly superior to that prevailing in the Canadian economy as a whole.

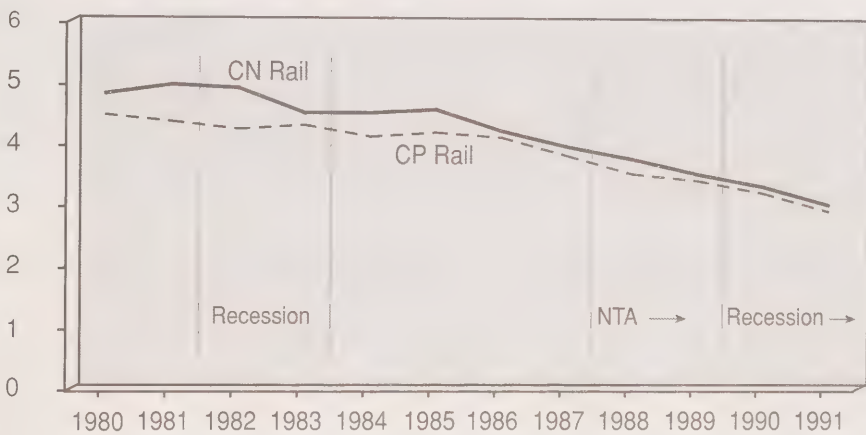
Labour is the input on which the railways have made the greatest economies. However, there has also been reduced use of other inputs. The track kilometres operated by the railways were reduced by 14% between 1983 and 1990, with this mainly attributable, of course, to branchline abandonment. The number of freight cars in use fell by 18% and there was also a very modest reduction in locomotive usage. New capital investment by the railways showed a marked decline throughout the 1980s, with the only major exception being the heavy investment by CP Rail in the new Rogers's Pass tunnel in 1988. In real terms, the combined average annual capital investment by CN Rail and CP Rail in the years 1989-91 was only 40% of the figure recorded earlier in the decade in 1982-84.

FINANCIAL PERFORMANCE

Figures 5.3 and 5.4 show operating revenue and operating expenses on a ton-mile basis for CN Rail and CP Rail over the period 1980-91. These graphs are taken from Exhibits 2.7 and 2.8 in the IBI study undertaken for the NTARC.

Figure 5.3
Operating Revenue Per Revenue Ton-mile

In 1986 Cents for CN Rail and CP Rail

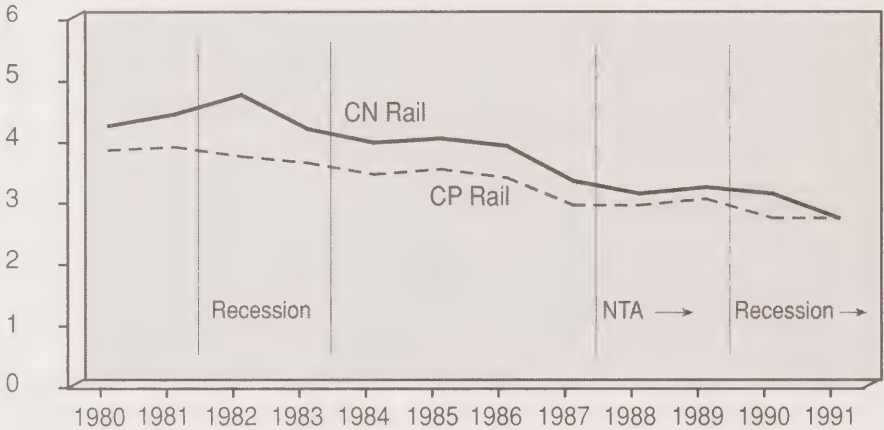


SOURCE: IBI

Competitive pressures have forced down the rates which the railways have been able to obtain from shippers. Over the years, much of the most profitable traffic has been lost to the trucking industry and the railways are substantially left with bulk products, where rates cannot be raised because of the need for these products to compete in world markets. Operating revenue per ton-mile was under pressure for both CN and CP well before the *NTA*, 1987 took effect. Using more detailed figures compiled by IBI, average revenue per ton-mile of the two railways was 4.68¢ in 1980-81, with this figure expressed in terms of 1986 cents. By 1990-91, average revenue per ton-mile was down to 3.06¢, for a fall in real terms of 35%. As a result of the productivity improvements outlined earlier in this chapter, operating expenses were also falling (by roughly 29% in this time period), but not quite as fast as revenue. The operating margin of the railways was being squeezed.

Figure 5.4
Operating Expenses Per Revenue Ton-mile

In 1986 Cents for CN Rail and CP Rail



SOURCE: IBI

Throughout the 1980s, the operating revenues of Canadian railways always exceeded their operating expenses. This does not mean that the railways were economically viable, as operating expenses do not include any return on capital invested. As explained in the discussion of other modes in earlier chapters, the operating ratio is defined by expressing operating expenses as a percentage of operating revenues, so that a low operating ratio is more favourable from a railway standpoint. In the two years 1989-90, the operating ratio averaged 94.4% for CN Rail and 90.8% for CP Rail.

The Canadian railways have argued that an operating ratio no higher than 80% is necessary to leave a sufficient margin to provide an adequate return on capital employed. On 1990 figures, the ratio of railway assets to operating revenues for CN and CP together was 1:90; an operating ratio of 80% would therefore imply a pre-tax return on assets of 10.5%. Although Canadian railways are very unlikely to achieve an operating ratio as low as 80% in the foreseeable future, nevertheless this objective would not seem to generate an excessive rate of return. In the United States, the most profitable railroad, Norfolk-Southern, has in fact attained an operating ratio below 80%. However, the overall average operating ratio for U.S. Class I railroads in 1989-90 was considerably higher than this, at 88.2%.

Pursuant to the problem of the inadequate operating ratio for Canadian railways, the IBI report calculated the pre-tax rates of return on capital earned by CP Rail and CN Rail. The results from IBI Exhibit 3.4 are shown in Table 5.1.

Table 5.1
Railway Rates of Return (%)

	CP Rail	CN Rail
1985	11.7	5.9
1986	11.3	4.7
1987	14.6	8.5
1988	11.7	9.7
1989	6.2	6.3
1990	7.2	2.8
1991	1.6	4.0

Note: Without special restructuring charges, CP Rail rate in 1991 would have been about the same as in 1990; and CN Rail rates would have been about 6.0% in 1991, 4.3% in 1990 and 7.0% in 1989. CN Rail was higher than CP Rail in 1989 mainly because low grain shipments resulting from the 1988 prairie drought affected CP more than CN.

The IBI report proceeded to show that the rates of return earned by Canadian railways are substantially less than those earned by regulated industries in Canada — gas and oil pipelines, gas utilities and telephone companies. Compared with major U.S. railroads, the CP Rail rate of return was high until 1988 but has since fallen significantly. An examination of railway rates of return compared with a sample of major Canadian industrial firms was less conclusive. It appeared that the railway returns were comparable, although on the low side, in 1984-86; that the railways did not participate in the general improvement in returns in the period 1988-89; and that in the recessionary years 1990-91 reductions in railway returns on capital were in line with those of other companies. (See IBI Exhibits 3.1 to 3.6 and Summary, p.25.)

From this analysis, IBI concluded:

Based on these findings we conclude that neither CN Rail nor CP Rail can be considered financially viable if their financial performance during the three years 1989-1991 is not improved. (p.26)

However, three obvious comments have to be made on this conclusion. First, many Canadian industries would not be considered as viable in the long-term on the basis of rates of return earned in 1989-91, as this includes two severe recessionary years. Second, railway rates of return have been depressed by special restructuring charges, which are discussed later. Third, railway rates of return were adversely affected in 1989, before the recession started, as a result of low grain shipments caused by the 1988 prairie drought.

FUTURE INDUSTRY VIABILITY

Few of the problem areas identified in the rail sector appear related to the provisions of the *NTA, 1987*. It is interesting to note, in this regard, that the overall recommendations in the CP Submission to the NTARC in June 1992 focus on federal-provincial co-ordination, taxation, and competition with the trucking industry. There is only one reference to regulation, namely to align this more closely with the regime in the United States (p.31). Similarly, the Canadian National Railways Submission of June 1992, "urges the Commissioners to bring a broad perspective to the Comprehensive Review" (p.6), and this advice appears to be partly because most of the complaints of CN do not relate to specific changes introduced in the 1987 legislation.

The operating ratios for CN and CP have already been given for the two years 1989-90 and these averaged 93% for the two railways together. However, this ratio was particularly unfavourable because of three factors already mentioned — the recession in 1990, the low grain shipments in 1989, and CN restructuring changes in both years. If one goes back to 1988, the railway operating ratio averaged 86.1% and in 1987 it was 85.6%. Suppose that, after the recession, the railway operating ratio returns to about 88%. From an operating ratio of 88%, the railways would need a further improvement of some \$470 million in the margin between operating revenues and operating expenses to achieve the objective of an operating ratio of 80%.

The present section starts by considering the prospects for increased railway revenues. It then proceeds to consider possibilities for reducing expenses in two broad categories — plant rationalization and labour productivity and compensation. The section closes with an examination of the tax burden on Canadian railways.

Revenue Outlook

The composition of rail traffic has not changed significantly during recent years and bulk materials represent more than 75% of rail tonnage. Prospects for growth in this segment of rail traffic are not promising, mostly because of strong international competition and the general view that no significant new production or extractive facilities are expected to come on stream or are even in the planning stage in Canada. Additional traffic depends largely, if not exclusively, on Canada's ability to improve its competitive edge in this area.

Export grain also represents an important part of rail revenues and CN and CP's financial results often reflect the volume of grain export traffic. Grain rates are presently

regulated, heavily subsidized and include a fixed contribution to railway overhead costs. The railways are protected from competitive pressures in that area and are assured of a given return on the transport of this commodity. The situation could change drastically, should subsidy policies be modified to a "pay the producer" basis, such that railway revenues would also be subject to competitive pressures in this area.

Intermodal traffic has been the most important growth sector of rail traffic in the last decade. The tonnage moved by CN and CP increased by 22% in the period 1984-91. Although this is the most promising sector for railway traffic development, the return to the railways has been reduced in recent years as a result of competitive pressures between ports and from trucking. Intermodal rail traffic is discussed more fully in Chapter 7.

The IBI study concluded pessimistically on the overall revenue outlook for CN and CP.

Given all the above, a realistic projection of Canadian railways revenues over the remainder of this decade would be essentially flat, in current dollars, in the context of a continuing low national inflation rate. This is equivalent to a 1-2% continuing decline in real, price-adjusted revenues.

Volumes can be expected to grow, albeit at a moderate rate, as the economy recovers. No dramatic and significant new sources of traffic are foreseen. Competitive pressures between railways, between railways and other modes, and between Canadian producers and their foreign competitors will not allow price increases and may lead to further reduction in rail rates, even in current dollars.

While "no significant change" revenues is not an exciting forecast, it is a reasonable one in the Canadian railway context. We suggest it is a prudent starting point on which to base possible policy initiatives relating to the ongoing financial viability of CN Rail and CP Rail. (p. 33)

Plant Rationalization

The issue of plant rationalization is not new in Canada. Surplus rail lines have been the subject of carrier and/or public concern since the 1920s. The Review Commission has paid particular attention to this issue since, contrary to other modes of transportation, railways must finance their rail infrastructures through commercial revenues, which implies that track must be managed on a commercial basis, the same as any other business decision of the railway industry. Inefficiencies in the management of infrastructure ultimately reflect on rates charged to customers, and surplus or inadequate rail infrastructure may constitute a serious deterrent in a highly competitive environment.

CN and CP stressed during the debate which preceded the enactment of the *NTA*, 1987 that they had considerable excessive trackage to support. CN stated that two-thirds of its network generated only 10% of its traffic, while CP stated that 46% of its network generated only 3% of its traffic.

Table 5.2 is taken from the IBI study (Exhibit 5.3) and reproduces estimates of traffic density made by Transport Canada.

Table 5.2
Traffic Density, 1990

Density MGTM/mile*	CP		CN		Total	
	Miles	%	Miles	%	Miles	%
Less than 0.2	1,525	12.1	1,708	8.8	3,233	10.1
0.2 to 2.0	4,253	33.6	6,575	33.7	10,828	33.7
More than 2.0	6,861	54.3	11,231	57.5	18,092	56.2
Total Mileage	12,639	100.0	19,514	100.0	32,153	100.0

* MGTM/mile = millions of gross ton miles of traffic per mile of rail line.

In 1990, the average density of traffic on CN and CP together was 9.8 million gross ton-miles per mile of track, and this was only 60% of the traffic density achieved by the seven largest U.S. railroads. Although modest gains in traffic densities have been achieved by both Canadian railways in the last decade, the gap with their U.S. counterparts is widening further. Many factors may explain lower traffic densities on the Canadian network, such as longer distances, lower volumes and a more dispersed population, but the comparison is nevertheless indicative of a significant problem area.

Transport Canada established an order of magnitude of savings which would result from the abandonment of trackage with traffic density of less than 2.0 MGTM/mile and this is taken from the IBI report. (p.39) The figures are slight overestimates, as they do not fully take into account railway revenues that would be lost as a result of abandonment.

Of the Canadian system, 3,233 miles have a traffic density of less than 0.2 million gross ton-miles per mile of track. This amounts to 10.1% of the total mileage and, if this trackage were abandoned, there would be savings of some \$47 million per annum.

A further 10,828 miles of track have traffic density in the range of 0.2 to 2.0 million gross ton-miles per mile of track. These constitute 33.7% of the total railway mileage and, if these were abandoned or sold as short lines, there would be annual savings to the Class I railways of \$216 million.

Table 5.3
Potential Annual Savings from Plant Rationalization

Railway	Density (MGTM/mile)		Total
	Less than 0.2	Between 0.2 and 2.0	
CP	1,525 mi. = \$23M	4,253 mi. = \$85M	\$108M
CN	1,708 mi. = \$24M	6,575 mi. = \$131M	\$155M
Total	3,233 mi. = \$47M	10,828 mi. = \$216M	\$263M

If all trackage below 2.0 MGTM/mile were abandoned or sold as short lines, CP would have a traffic density slightly superior to that currently enjoyed by the leading seven U.S. railroads and CN, a traffic density similar to these U.S. railroads.

The railways may rationalize their networks either by abandoning trackage, conveying lines to other railway companies or by joint operations of segment of tracks with more than one railway. A pro-active approach to plant rationalization could considerably reduce the operating expenses of Canadian railways.

a. Line Abandonment

Although the current legislation on branchline abandonment and the establishment of short line railways is much improved on the arrangements operative before the *National Transportation Act, 1987*, the extent of abandonment and conveyance has been below what most observers expected or feared when the legislation was enacted.

Table 5.4 shows that the average length of trackage abandoned per year since 1988 has increased by 35% over that realized in the seven years preceding the reform of economic regulation in transportation, with most of this increase achieved by CP.

Section 159(4) of the *NTA, 1987* specifies that in the period 1988-92, a railway company is not allowed to abandon more than 4% of its route mileage in any one year. This requirement ceases to operate effective 1993.

The railways claim that their efficiency has been impeded by the requirement to continue to operate low density rail track. Yet, as the National Transportation Agency has noted in its Staff Report to the Review Commission, *Rail Rationalization*, of March

1992, neither CN nor CP “has filed new abandonment applications amounting to the statutory limit of 4 percent of its total trackage in any one year.” (p.1) The Agency also states that abandonment in the four years 1988-91 amounted to only 7% of total CN trackage and 9% of total CP trackage.

Table 5.4
Rail Abandonments, 1981 to 1991

Period	CN		CP		Total	
	Miles	Ave./year	Miles	Ave./year	Miles	Ave./year
1981/87	2,301	329	1,483	212	3,784	541
1988/91	1,456	364	1,457	364	2,913	728

Source: NTA, *Rail Rationalization*, March 1992, App. 2.1 and further information supplied by the Agency.

These figures are not in dispute and, on the basis of discussions with the railways, it is not completely clear as to why the railways have not availed themselves more fully of the abandonment that would have been legally allowed in the period 1988-92. The problem may be partly related to the fact that over 6,000 miles of prairie branch lines are protected until the year 2000 and have therefore not been subject to abandonment applications. In addition, both railways claim that present abandonment procedures, although improved on those in effect prior to the *NTA, 1987*, are far too complex and cumbersome. CN stated in its submission to the Review Commission:

These regulatory processes consume substantial amount of resources and time, all to sanction a market-determined outcome that almost invariably is a foregone conclusion. Without exception, the burden of proof today is on the railway company to defend an exit decision that properly should be its own prerogative in a competitive market place. (p.23)

CP denounced the major weaknesses of the current rationalization procedure in similar terms in its submission to the NTARC.

b. Short Lines

The establishment of short line railways is perceived by Class I railways and by the shipping community as a means of ensuring the continuation of rail freight service on certain low density lines. Short lines have a much lower cost structure and a more

flexible organization best suited to low density lines in a competitive environment. The interest of shippers and carriers in short lines follows a positive experience with the concept in the U.S. in the years subsequent to the *Staggers Act* in that country. Almost 200 short line railways have been created in the U.S. since that time.

Table 5.5
Short Line Railways in Canada

Year	Seller	Miles	Prov.	Buyer
Conveyances to existing railways:				
1988/92	Misc.	75	Qué., Ont.	Misc.
1992	CN	154	Ont.	Ontario Northland
Subtotal		229		
Conveyances to newly-formed short lines:				
Transactions finalized:				
1986	CN	108	Alta.	Central Western Railway (CWR)
1990	CN/CP	50	Sask.	Southern Rails Cooperative
1992	CN	71	Ont.	Goderich and Exeter Railway (GER), wholly-owned subsidiary of Railtex Inc.
1992	CP	133	Alta.	CWR
1992	CP	10	Qué.	Bellgaz (shipper located on line)
Subtotal		372		
Transactions in Progress:				
	CN	230	N.S.	Selected tender: Railtex Inc.
	CN	126	Qué.	Selection of successful tender in progress
	CN	113	Ont.	Initiating requests for tenders for 5 lines
	CP	58	N.S.	Announced its intention to sell Dominion Atlantic Railway (DAR)
Subtotal		527		
Total lines conveyed		1,128		

Source: NTA, *Rail Rationalization*, March 1992; transactions in progress, NTARC staff, November 1992.

Table 5.5 shows that short lines had a modest beginning in Canada, but that CN and CP now demonstrate considerable interest in that option.⁷ The mainline railways want to be relieved of the expenses of lower density lines, but to see rail service continue to the communities affected and hence obtain long haul traffic from interchange with the short lines. The mainline railways have clearly stated that they would sell only those lines which have a reasonable traffic base and a better chance of being successful commercially under a short line environment and only to parties who can demonstrate adequate financial resources and the necessary know-how to run a railway.

The development of short lines does not proceed without raising serious concerns for carriers and shippers. Carriers are dissatisfied with the current conveyance procedures which are felt to be excessively complex and lengthy. The sale or conveyance of a federally regulated line is subject to the approval of the Agency, which may hold public hearings to determine whether the transaction is in the public interest. Criticism of the regulatory process is very similar to that regarding line abandonment. Short line operators are also unwilling to consider lines which carry a VIA Rail service, as these are deemed to be lines for "the general advantage of Canada" and hence would remain under federal jurisdiction.

Short line railways are expected to be under provincial jurisdiction, which raises a number of concerns. First, most provincial rail legislations are antiquated and need in-depth revision to accommodate the current and future requirements of the industry. The new operator must request authority to operate from the appropriate provincial regulatory body, largely duplicating the approval process of the Agency. Secondly, shippers located on such lines are likely to lose some of the benefits now offered by the *NTA, 1987*, such as dispute resolution and competitive access mechanisms.

c. Joint Track Operation

In addition to the abandonment or conveyance of low density lines, there could be substantial economies in rail operations through sharing mainline track, where present mainline capacity is considerably underused. To pursue this idea further, the Review Commission asked the Research and Traffic Group to examine the economics of consolidating CN and CP operations from Sudbury/Capreol through Northern Ontario to Winnipeg. The vast majority of traffic in this area is bridge traffic, either originating in eastern Canada and destined for western Canada or the other way around. Very little local traffic originates between Sudbury/Capreol and Winnipeg. All traffic currently moving through this area and expected to move in the foreseeable future could be accommodated on one mainline. For example, if CN Rail were to abandon its line through Northern Ontario and route its traffic along the CP line, there could be substantial operational savings.

Joint track usage on a large scale raises several difficulties which must be addressed if the enterprise is to be successful. CN and CP have conducted negotiations on

the joint operation of main trunk lines for almost a decade; however, the announcement of an agreement for lines in the Ottawa valley has now been made.

The interest of competing firms with a long tradition of non-co-operation in infrastructure sharing must be reconciled, while maintaining a competitive environment for the benefit of the shipping community. Differing operating practices of carriers must also be accommodated, which may reduce some of the expected economies of scale. Moreover, the saving in investment may not be substantial; in many areas, the value of the right of way is very low, while the value of the rail itself will approximate to its scrap value. Rail sharing on a large scale includes a network approach leading to joint usage of mainline track and the conveyance or abandonment of other lines. The relevant provisions of the *NTA, 1987* do not lend themselves to a network approach and would be a serious deterrent to such action by the railways. Finally, isolated communities could be affected by the loss of local passenger and freight services and have no satisfactory alternate solution.

Labour Productivity and Compensation

a. Labour Productivity

The following discussion of labour productivity draws heavily on the IBI Report (pp.40-4). IBI stress the "mechanistic" nature of some of their calculations and the use of this word below is not a criticism of IBI but rather an acknowledgment of their forthright approach.

As explained earlier in this section, labour employment has fallen very sharply in Canada, but not to the same extent as in the United States. In 1991, GTM per employee for CP Rail was only 60.1% of the level achieved by the leading seven U.S. railroads, while the CN ratio was lower at 55.9%. It is "mechanistic" to estimate what the savings would be to Canadian railways if they could achieve U.S. levels of railway productivity, as traffic density, geography, topography and climate are very different in Canada. Nevertheless, making this mechanistic calculation, if CN and CP achieved the same GTM per employee as the leading seven U.S. railroads, they could reduce annual labour costs by almost \$1 billion.

It would not be costless for Canadian railways to achieve the labour economies of U.S. railroads. Significant capital outlays would be required and labour downsizing would mean a heavy burden of severance payments. This was explored in a contract research study undertaken for the Commission.⁸

Employment security was negotiated in 1985 for railway shop craft and non-operating employees who had completed eight years of cumulative compensated service. Such employees are entitled to draw salary and benefits until they retire, provided that they continue to be available for work. Benefits on a similar scale are also available to railway employees in other trades. These so-called "rich job security packages" were created when the railways did not anticipate the extent of their downsizing. These

packages obviously impose a heavy burden. In 1991, the cost of CN employee separations in Canada amounted to \$94 million. In its annual report for 1991, CP wrote off \$251 million in restructuring charges to cover severance payments and related expenses, although the amount written off in 1991 related to more than this one year.

Nevertheless, the economies to be achieved by labour downsizing are considerable. This is evident, for example, in a CN Rail confirmation on November 27, 1992 that it is seeking further reductions of some 10,000 jobs, equivalent to nearly one-third of current employment.

b. Labour Compensation

Average weekly earnings in railway transport were \$841 in April/June 1992, against a figure of \$565 for the trucking industry. Average weekly earnings in the railway industry were +9% more than in the trucking industry. Should this differential be reduced to 35%, then this would reduce the labour expenses of Canadian railways by some \$230 million per annum, or nearly 10% of their annual wage bill.

The reasons for higher earnings in the railway industry have been discussed in Volume I of the report. To repeat the discussion there, the explanation may be partly due to the regulatory protection given to the railways over many decades, the inability and/or unwillingness of railway management to countenance strikes, and the speedy intervention of government on the rare occasions when strikes have occurred.

Taxation

Staff of the NTARC have spent considerable time reviewing this issue; the discussion in this section is long and complicated, but this is unavoidable.

The Canadian railways have claimed for several years that they are subject to much higher levels of tax than U.S. railroads and that this adversely affects their competitive position. The adverse treatment on taxes relates to diesel fuel taxes levied at both the federal and provincial levels in Canada; provincial sales taxes, which include railway rolling stock in Canada and not in the United States; municipal property taxes; and a marginal penalty in corporate tax rates together with substantially less favourable treatment of capital cost recovery than in the United States. Several efforts have been made to document the tax burden on Canadian railways as compared with the corresponding taxes on U.S. railroads.

The findings of the Round Table on Transportation through the Greater Vancouver Gateway, *Why Canada's Rail Taxes Need to be Overhauled*, December 1991, can be summarized as follows:

1. Canadian railways paid \$236 million more in fuel and sales taxes in 1990 than if they had been taxed on the basis applicable to railroads in the U.S. This higher tax burden is explained by the federal excise tax on diesel fuel used by railways in Canada, provincial taxation of locomotive diesel fuel, and provincial taxation of

railway rolling stock. U.S. railroads are faced with very little taxation in these areas. Of the excess tax burden in Canada, roughly 30% is attributable to the federal government and 70% to provincial governments.

2. Municipal property taxes on railways are much higher in Canada than in the United States and the excess Canadian tax burden is estimated at \$85 million in 1990. (However, the Round Table methodology is based on the concept of equivalence of municipal taxes on the basis of gross ton-miles of work performed; the Round Table's estimate of the excess burden on the basis of track length seems more appropriate and this is \$38 million.)
3. On payroll taxes, there was a benefit to Canadian railways of \$96 million in 1990. This comparison is made on the basis of Canadian railways' payments to Canada and Quebec Pension Plans and to public health and private "top up" plans, as compared with the payments made by U.S. railroads.
4. The net result of the three factors considered above is an extra tax burden on Canadian railways of \$225 million in 1990. This was equivalent to 3.8% of the total operating revenues of CP and CN.

The Round Table also referred to capital cost recovery allowances that were more advantageous to railways in the U.S. than in Canada. However, the effect of this was not included in the \$225 million additional tax burden indicated above. In December, 1991, Canada introduced more generous capital cost allowances for railway investment, but this still left the U.S. railroads in a more favourable position.

In presentations to the NTARC, 39 submissions referred to the issue of railway taxation. Of these briefs, 34 supported the view that Canadian taxation of rail carriers was more burdensome than the situation facing U.S. railroads. Only three submissions queried the case advanced by the Canadian railways and these submissions all relied on a staff report produced by the National Transportation Agency in June 1992, entitled *Viable and Effective Transportation Services*.

The Agency report states that, in respect only of those taxes considered in the Round Table report, "Agency staff concur with the Round Table Study that \$225 million in 1990 is a good estimate of the additional total burden on the two major Canadian carriers." (p.13) However, the Agency staff argue that the basis for comparison is incomplete and that Canadian railways are not suffering an overall disadvantage.

In comparing the burden which Canadian railways would likely bear if assessed under the U.S. scheme, the Round Table study chose to exclude payroll taxes that Canadian railways would be assessed under U.S. law and which have no equivalent in Canada. For instance, U.S. railroads pay

a payroll tax equal to just over 16 percent of wages to support "Tier II" retirement benefits. This tax is not assessed in Canada but applies to railways in the U.S. under federal jurisdiction.

The U.S. Tier II taxes are distinct from Canadian company payments to their private pension plans and the U.S. retirement benefits supported by Tier II taxes are distinct from private pension benefits. The amount that U.S. companies pay in taxes is set by Congress and the benefits that U.S. employees receive are also set by Congress and are not subject to negotiated changes. Strictly speaking, this is a tax burden on U.S. railroads for which there is no Canadian equivalent. However, because company pension costs in Canada go to support retirement benefits, these pension costs were in fairness balanced against Tier II taxes that would be payable in the U.S. for retirement benefits.

The inclusion of U.S. retirement taxes in this comparison reverses the results of the Round Table Study. Canadian railways would pay an estimated \$230 million per year more in pension taxes under the U.S. regime than in pension costs under the Canadian one. Considering all taxes and pension costs, CN and CP Rail combined would have paid slightly more under the U.S. regime than under the Canadian one, according to this analysis. (p. 14)

The Vancouver Round Table did not include Tier II taxes in its comparison on the grounds that "though mandated by law and administered by government, (they) amount to private pension plans. Therefore their costs, like the private pension plan costs of Canadian railways, should be excluded in tax burden comparisons." (p.7)

The railways gave a public response to the Staff Report of the National Transportation Agency in June 1992.

A rigorous and proper comparison between the Canadian and U.S. tax regimes as they affect the railways would exclude consideration of the "Tier II" payments, as did the Vancouver Round Table Study.

First, the U.S. "Tier II" payments are employer contributions under a government-administered industry pension plan, a fact recently recognized by the U.S. Commission on Railroad Retirement Reform when it recommended that the "Tier II" system be given back to the railway industry. The "Tier II" payments are analogous to those made by Canadian railways to their respective pension plans as they are both intended to serve as sources of funds for the payment of retirement

benefits to former employees over and above those provided by social programs.

Second, the current high level of "Tier II" contribution rates reflects not only the deferred costs of manpower reductions on U.S. railroads incurred in earlier years, but also the largely pay-as-you-go nature of this retirement system as contrasted to the comprehensive funding requirements of the Canadian railway pension plans.

Third, because of the differences in these conditions, pension expense comparisons between American and Canadian railways based on a single or limited number of years, as the Agency staff report has apparently made, will yield either misleading or meaningless conclusions.

There have been major differences between the levels of CN and CP Rail's pension plan payments and "Tier II" payments by U.S. carriers. In 13 of the 17 years between 1974, which was the first full year of the "Tier II" system, and 1990, CN and CP Rail's pension expense levels were higher than their payment levels would have been if they had been paying "Tier II" taxes. Given the funding differences between the two systems, a proper comparison would have to be performed on the basis of the difference in their present values, and not on a single-year basis. Contrary to the conclusion reached by the Agency, the present value of CN and CP Rail's total pension plan payments over the period has been higher than the equivalent "Tier II" payments would have been. (pp. 4-5)

In response to the railway comments, the Agency Staff Report again asserted the relevance of including Tier II payments in a tax comparison in a public comment dated July 1992.

The railway objection in this section is contained in the statement that "the Agency chooses to characterize the 'Tier II' payments as 'taxes'...". The United States Congress, which enacted these provisions, states that they constitute a tax. The United States General Accounting Office, in a series of reports on railroad competitiveness, refers to these payments as Tier II taxes. The Association of American Railroads has stated that, "Since Congress — not the participants through collective bargaining — determines both benefit and payroll-tax levels for these so-called 'Tier II benefits,' any reference to Tier II as being a 'private' plan is inapt." Agency staff follow these authorities in stating that this tax is in fact a tax. (p. 3)

Before considering these various arguments, two calculations have to be made. First, an allowance must be made for differences in capital cost recovery rates between Canada and the United States, incorporating the improved Canadian rates that took effect in December 1991. However, the lower figure produced by the Round Table should be used for the municipal property tax burden. With these changes, the NTARC staff estimate that, on the measures considered to this point, the overall tax disadvantage of Canadian railways vis-à-vis U.S. railroads was 4.8% of operating revenues, or \$280 million in 1990. Second, the Agency suggested that Canadian railways would have paid some \$230 million per year extra in pension taxes under the U.S. regime in 1990. The Canadian railways claim that this figure is too high; on the basis of the NTARC staff examination of the evidence, a figure of \$200 million is used below.

Three possible approaches regarding the tax burden on Canadian railways were considered:

1. to accept the railway argument that the Tier II pension payments are not relevant to a tax comparison and that hence, the Canadian railways have a tax disadvantage vis-à-vis the United States equivalent to \$280 million;
2. to accept the argument of the Agency staff and include the Tier II pension payments in the calculation, which reduces the overall tax disadvantage of Canadian railways to \$80 million; and
3. to reduce the Tier II pension gap by \$100 million to reflect interest on \$0.8 billion, with this last figure reflecting the excess of pension expenses met by CN and CP over the years 1974-1990 as against what they would have paid under Tier II arrangements for this period. (This \$0.8 billion is the actual difference in pension expenses and comparable Tier II payments, making no allowance for any increase to this capital sum from interest payments earned in the years prior to 1990; the railways could argue that the sum of \$0.8 billion used in this calculation is too low.) Following through these calculations, the excess tax burden on Canadian railways would be of the order of \$180 million.

The figure of \$180 million generated in (3) above is an approximate, but not a definitive, estimate of the extra tax burden faced by Canadian railways vis-à-vis U.S. railroads.

RAILWAY PASSENGER TRANSPORT

Railway passenger transport was not addressed explicitly by the NTARC, as this was more properly part of the work of the Royal Commission on National Passenger Transportation. The short note in this section is merely to place rail passenger transport in context.

Although Statistics Canada reported 29 million passengers transported by rail in 1990, over five-sixths of these were commuter travellers and beyond the terms of reference of the present report. Intercity rail passenger services are still offered by some of the Class II railways in Canada, for example Ontario Northland and Algoma Central, but the bulk of such services are provided by VIA Rail. Table 5.6 provides key statistics for Via Rail over the last four years.

Table 5.6
VIA Rail: Traffic and Financial Statistics

	1988	1989	1990	1991
Passengers (thousand)	6,415	6,457	3,536	3,633
Passenger-miles (million)	1,428	1,517	785	820
Passenger revenues (\$million)	220	244	143	150
Operating expenses (\$million)	790	775	540	524
Revenue/operating expenses (%)	27.9	31.5	28.9	31.2

Source: Annual Reports of VIA Rail Canada Inc.

Rail passenger services are not a large part of the Canadian transportation scene. In October 1989, the government announced a restructuring of railway passenger services in Canada and substantial reductions in service took effect in mid-January 1990. The effects of this are seen in the statistics of passengers and passenger-miles in the table. Only 1% of intercity passenger trips were made by rail in 1990. Even including government subsidies to VIA Rail, passenger traffic accounts for less than 9% of the total revenues of Canadian railways. As indicated on the last line of the table, only 31.2% of the operating expenses of VIA Rail are recovered through the fare box.

SUMMARY

The content of this chapter can be summarized as follows:

1. Productivity improvements and operating cost reductions in the railway transport system in Canada have been substantial, but not sufficient to offset decreases in operating revenues. It is estimated that Canadian railways need an increased margin between revenues and expenses in the order of \$470 million to become completely financially viable.

2. The current financial situation of Canadian railways has not been caused by the NTA, 1987. Competitive pressures on their revenues from U.S. railroads and trucking were in place well before the introduction of the Act.
3. Although railway operating revenues will show some recovery after the present recession is over, these revenues are not likely to increase significantly in the longer term. Bulk traffic is not expected to show significant growth and there will be continued competitive pressure on other traffic. Improvement of the overall financial situation will depend almost exclusively on the ability of the railways to reduce their operating costs and to adapt their operations and plant to market needs.
4. Plant rationalization offers considerable scope for cost reduction through the establishment of short line railways, track abandonment and joint track usage.
5. Labour productivity is considerably lower on Canadian railways than on U.S. railroads. Labour earnings on Canadian railways are higher than in the Canadian trucking industry. These factors add considerably to labour costs.
6. Taxation of railway operations in Canada is higher than in the United States.

NOTES

- 1 See, for example, Richard Lande, "Bill C-18 and C-19 Analysis," *Canadian Transportation & Distribution Management*, November, 1987, p.47. Lande states:

Now that Bill C-18 and C-19 have received Royal Assent...shippers have reason to be optimistic about imminent rate reductions and service improvements.

Never before in Canada or internationally have such an array of legislative provisions been enacted which provide the users of rail service with enhanced negotiating opportunities and substantive legal recourse designed to offset locational dependence on a railway.

- 2 Federal jurisdiction covers all railways which cross provincial or international boundaries. In addition, railways located entirely within a province fall under federal jurisdiction, if they are declared to be a work to the general advantage of Canada or of several provinces. Thus, the Algoma Central Railway is under federal jurisdiction, although it is entirely located within one province. The most important railways under provincial jurisdiction are BC Rail, the Central Western Railway, Ontario Northland and the Roberval and Saguenay Railway.
- 3 The NTARC also commissioned independent research on confidential contracts and competitive access: see Canarail, Hackston and PMS&K, referenced in Appendix 1.

- 4 CN has formed CN North America. The company has owned three subsidiaries in the U.S. for many years — Duluth, Winnipeg and Pacific; Grand Truck Western; and Central Vermont Railway. This allows service from Canada on CN North America to Duluth, Chicago, Cincinnati and New London, Conn. CP has formed CP Rail Systems. The company has recently acquired complete, as distinct from minority, ownership of the Soo Line Railway; ownership of the Delaware and Hudson Railway; and Delaware and Hudson running rights on some Conrail lines. Through its subsidiaries and running rights, CP now has a U.S. route from Windsor as far as Portal, Sask., which includes access to Kansas City and Louisville; and a route from Fort Erie to New York City.
- 5 Canadian Transport Commission, *Final Staff Report: Inquiry into Effects in Canada of U.S. Rail Deregulation*, 1984, p.3.
- 6 Calculations from data in Statistics Canada 52-216, Fertilizers/chemicals include potash, sulphur, sulphuric acid and other chemicals. Forest products include both wood and paper products. Intermodal includes containers, piggyback and pool car traffic. The “other” category also includes some miscellaneous bulk products (for example, fuel oil and diesel fuel, which together account for 1.0% of total rail tonnage).
- 7 See, for example, the comments of Jacques J. Côté, CP Rail, *Short Line Railways: A Good Business Opportunity*, seminar organized by Ministère des Transports du Québec, CN, CP, and the Railway Association of Canada, Montreal, June 2, 1992.
- 8 E.G. Fisher, *Canadian Transportation Employment and Management-Labour Relations in Transition: 1985-92*, August 1992, pp.58-9.

6

Marine Transport

Canada has a highly fragmented marine industry, with neither a national flag deep-sea fleet nor an internationally competitive shipbuilding industry. Accordingly, Canada's level of competitiveness vis-à-vis international trade necessarily depends on developments outside its sphere of influence.

This chapter will focus on the following topics: the current status of regulation in the Canadian marine industry; the rationale for and impact of the *Shipping Conferences Exemption Act, 1987*; the impact of *Part V* of the *National Transportation Act, 1987*, relating to northern marine services; the current and future state of shipping via the Great Lakes/St. Lawrence Seaway system; and the structure and problems associated with the Canadian ports system.

STATUS OF REGULATION

Marine activities in Canada are not subject to economic regulation, aside from barging services in the Mackenzie River, the Western Arctic and the Lake Athabaska system. While shipping has always played an important role in Canada's import and export trades, the government has not seen it fit to develop or maintain a Canadian international merchant fleet during the past 40 years. In 1949, the federal government concluded that Canada was not justified in maintaining the Canadian flag deep sea fleet via subsidies or preferential tax treatment for shipowners and operators. This policy has not changed since then.

Canadian imports and exports are carried by international fleets which operate subject to free market discipline. There are no legislative or governmental barriers to entry or exit in the industry, and Canada, like most industrialized countries, has no cargo reservation laws limiting the choice of vessels for shippers or receivers. The lack of a Canadian flag international maritime fleet eliminates the need for protective legislation enjoyed by other national fleets, especially in the U.S., Japan and Europe.

Both international and domestic ship operators are subject to legislation in the *Canada Shipping Act*, which governs their operations in Canadian waters. This Act combined with various other environment oriented acts ensures that the vessel operations take place in a universally recognized safe manner, with due regard for the safety of crew, vessel and the environment. Canada is a signatory to all international marine safety and environmental conventions, although it often falls short on ratification. The Coast Guard is empowered to ensure compliance with both domestic and

international regulations by all vessel operators. The activities of liner shipping conferences in Canada are governed by *Shipping Conferences Exemption Act (SCEA)*, which is examined in the following section.

Domestic shipping on the Great Lakes and in coastal waters is not subject to economic regulation. This is due to the historical development of shipping, which has always exhibited a healthy level of competition. Part V of the *NTA, 1987* regulates marine activities on the Mackenzie River system, including the Western Arctic, and Lake Athabaska; there is no regulation of marine services in the Eastern Arctic.

SHIPPING CONFERENCES EXEMPTION ACT

The fundamental premise of *SCEA, 1987* is that it permits ocean carriers in conferences to make certain agreements amongst themselves which are exempt from the *Competition Act*. It is based on the philosophy that conferences are inherently beneficial to the overall interests of Canadian shippers, with the Act serving only to prohibit specific practices which are viewed as potentially harmful.

Conference legislation in Canada was initiated after the Helga Dan incident¹ which led to the development of the *SCEA* in 1971. This Act was revised in 1979 with certain additional pro-competitive features and extended to 1987. The 1987 legislation introduced additional provisions designed to increase the bargaining power of Canadian shippers, reduce the potentially abusive market powers of the conferences, and increase intra-conference competition.

Under the *SCEA, 1987* conferences are permitted to enter into agreements concerning the following:

- the use of tariffs and terms and service conditions;
- the use of loyalty contracts with certain provisos;²
- the terms for the use of service contracts;
- allocation amongst members of ports of call;
- times of sailing and kinds of service;
- cargo sharing, including the sharing of earnings and losses of conference members associated with the transport of the cargo; and
- admission to and expulsion from conference membership.

These agreements must also permit any conference member to take Independent Action with a shipper, except on confidential service contracts, after giving 15 days written notice to the other conference members. Independent Action is the right

of conference members to establish rates and/or service conditions that differ from the general rate structure of the conference.

The following actions by conferences are prohibited in the agreements:

- the engagement in predatory pricing policies;
- agreements whereby members use vessels for the purpose of preventing or unduly lessening competition at the expense of non-conference members;
- refusing to transport goods for a shipper who has used or is currently using non-conference lines;
- the prevention or limiting of use by the non-conference carrier of port and other facilities and services; and
- entering jointly into a contract with an inland carrier in Canada to establish a "through" rate.

Changes from Previous Legislation

The intent of the new legislation was to foster increased competition by introducing a number of key changes from the previous legislation.

Included in these changes was the specific prohibition of predatory pricing. As well, the negotiation and establishment of "through" rates by conferences with inland carriers was prohibited, ostensibly to prevent market abuse through undue influence over the railway companies and other inland carriers.

The 1987 legislation introduced the right of independent action on rates which many believe to be the most important change. Such action is permissible by conference carriers as long as other conference members are notified in 15 days. Such actions are public, filed with the conference tariffs and can be consulted by any party. Results indicate that the threat of independent action may affect conference rate making decisions for the benefit of the shippers, especially given the overcapacity in the market. However, conferences are not compelled to collectively follow independent action taken by one of their members. Moreover, independent action is not allowed on service contracts, effectively eliminating the use of confidential contracts, a normal commercial relationship in any other business.

While loyalty contracts are still allowed in name, conferences are now prohibited from requiring shippers to move 100% of their traffic under the contract. This results in significant protection for the shipper by removing an "all or nothing requirement" which would not necessarily be found in a contract governed by parties operating in a competitive environment. To date, loyalty contracts have all but disappeared due to this new provision which makes them ineffectual.

Conference members and shippers may enter into a confidential service contract to move a specified quantity of goods over a fixed time period in return for a specified

rate and service level. However, there is a crucial omission in this provision of the new legislation. The conferences are allowed to control the terms and conditions of these contracts since there is no provision for independent action on behalf of the individual conference member. This has severely limited the effectiveness of the provision, as evidenced by the lack of service contracts being used in Canadian trades. According to the Agency, only 18 service contracts were filed in 1991³ and only a very small percentage of conference trade has moved under them.

The provision for consultations between conferences and the designated shippers' group ostensibly gives a more powerful voice to the shipper community. However, questions exist as to whether the conferences provide sufficient information to undertake adequate consultations. This provision is quite ineffectual unless both parties can discuss problems with the necessary information available.

The new act no longer exempts agreements between conferences and non-conference carriers from provisions of the *Competition Act*, although there has been no final definition of the meaning of the term "agreement." The conferences argue that the term means conference agreements and thus they should be exempted under the *SCEA*. Shipper interests argue that these agreements allow conferences effectively to control the market by eliminating a competitive element. Since these agreements usually involve vessel allocation and route rationalization, and do not directly attempt to control rates, they are not necessarily anti-competitive in nature. Effective control of vessel supply will result in upward pressure on freight rates, which will in turn encourage new carriers to enter the market, reducing rates in the long run to an economically efficient level.

Canadian versus U.S. Conference Legislation

The primary purpose of both Canadian and U.S. legislation is the same: to exempt conferences from competition legislation while safeguarding domestic economic performance through provisions which enhance intermodal competition. In both Canada and the U.S., the primary vehicles for safeguarding economic interests are *independent action* and *service contracts*. In addition, similar tests are used for defining a conference's antitrust exemption. This is done not only to clarify the law but to limit the extent of conference collusion. Both laws contain provisions designed to limit the scope of loyalty contracts. Finally, both sets of legislation explicitly sanction conferences and the collective pricing and rationalisation which goes with their agreements. Similar agreements on the part of shippers are also sanctioned.

While the general orientation and many of the key provisions are similar, significant differences remain. The most obvious is that while closed conferences are allowed under the *SCEA*, open conferences are still required in U.S. trades. Canadian legislation merely exempts practices from the *Competition Act* while the U.S. aggressively regulates shipping operations. All rates must be filed in the U.S., both by conference and independent carriers, and the FMC actively enforces their compliance by carriers. Also, U.S. service contracts are public, while in Canada they are confidential.

Nevertheless, the Canadian legislation tends to run parallel to the U.S., in keeping with the goals of international comity and to ensure that Canadian shipping interests are not disadvantaged by regulatory distortions which could affect service availability.

International Liner Shipping and Canada

In 1989, the value of Canada's trade with countries other than the U.S. by the marine mode amounted to \$28 billion. The importance of efficient maritime transportation to destinations other than the U.S. is obvious. Although only between 7% and 9% of Canada's ocean borne export and import tonnage is carried by liner vessels (both conference and non-conference together), liner shipping carries a highly significant share in value terms, estimated at up to 70% of the total value of Canadian overseas trade.⁴

A significant proportion of Canadian liner traffic moves under terms regulated by conference agreements. However, on many routes, the availability of vessels and easy access to customers have resulted in intensified competition from the increasing number of strong independent carriers. Many Canadian shippers have found these independent lines to offer a viable alternative to conference shipping lines. In addition, some conference carriers act as independents in different trade routes.

There has also been a significant change in the role played by conferences. While conferences have traditionally been regarded as rate setting and enforcement entities, they are focusing more of their efforts on methods to address tonnage supply-demand imbalances in order to control operating costs and to co-ordinate the long-term capital investments of their member carriers. With rate making powers of conferences diminishing, there is likely going to be a significant decline in their influence and radical changes in their operating structure. This is evidenced by the rise of super carriers and vessel sharing agreements characterized by slot charters and controlled tonnage availability in the market. These agreements are not for the purpose of rate setting but to influence rate and service levels through control of vessel supply and tonnage allocation.

Over the period from 1977 to 1988, the conference market share has been significantly eroded in Canadian trades. In 1977, conference carriers transported 77% of inbound liner tonnage and 62% of outbound liner tonnage. By 1988, conference lines were carrying 58% of inbound tonnage and 48% of export tonnage. Since 1988, conference tonnage has continued to decline, while cargo moved by non-conference carriers increased. In 1990, the conference share of total liner tonnage was as low as 40%.⁵

The number of conferences serving Canada has also been declining for a number of years, from 34 in 1987 to 24 in 1991. Inbound conferences have decreased from 13 in 1987 to 9 in 1991, while outbound conferences declined from 17 to 9 during the same period. The number of combined inbound/outbound conferences increased slightly during the period, from 4 to 6. The *SCEA* effectively covers only outbound

conferences since Canada has no influence on inbound conference activities which originate outside the country.

With respect to lines comprising the conferences, the number of lines serving west coast shippers has remained nearly constant (approximately 34 lines) during the period, while the number of lines serving eastern shippers has declined from 50 in 1988 to 40 in 1991. Despite this decline, conference services maintain a presence on all of Canada's major trade routes, as do non-conference carriers.

During 1989 and 1990, the number of weekly services offered by independent lines equalled or exceeded the number offered by conference carriers. Also, on most routes, transit times outbound have been fairly consistent from 1987 to 1991, with non-conference carriers offering similar transit times as the conference carriers.

The increasing level of competition since 1988 has allowed freight rates in general to remain stable or decrease marginally in real terms. A recent study of shipping conferences tariffs indicates that rates for a number of major commodities are currently below 1983 levels in real terms, although the changes in freight rate levels vary between trade routes. Thus, from a shipper's perspective, service has improved on most routes since 1988, due to the availability and competitiveness of non-conference services and, more importantly, to the depressed overall ocean freight rates resulting from chronic overcapacity on many trade routes.

Issues and Concerns

A number of issues with regards to the *SCEA, 1987* have been raised, most concerning the rationale for continuing with the legislation and the implications of changes to it.

It is argued that the rationale for the Act is in direct conflict with the de-regulatory philosophy of the *NTA, 1987*.⁶ It is claimed that conferences, acting as cartels, should not have their practices exempt from Canada's Competition laws and should be treated as any other industry. Yet, while the concept of a legitimized cartel conflicts with the idea of a free and competitive market place, it has been suggested that it should only be prohibited if it acts in an anti-competitive manner. Conferences do not control Canadian liner trades and do not prohibit or interfere with independent carriers. There is no evidence that conferences have abused their dominant position, as evidenced by the lack of complaints to the Agency.

Both domestically and internationally, shipper interests are unhappy with the contractual arrangements enforced by liner conferences. Their inability to freely negotiate confidential contracts is in direct conflict with normal business practices. This causes business interests to resent conference operations, a feeling shared with U.S. and European Shipper's Councils.

There is speculation that the abolition of the *SCEA* would force major conference carriers to use U.S. ports for their North American calls, at the expense of Canadian ports. While this is a possibility, there is no firm evidence available on this matter. The current changes in the international fleet, especially the increasing size of

vessels and the use of hub-and-spoke distribution systems, makes east coast Canadian ports look increasingly non-viable. No legislation can alter this industry development.

The notion of international comity arises, as *SCEA, 1987* allows Canada to remain in harmony with its trading partners vis-à-vis conference legislation. Such action may also aid the viability of Canadian ports by ensuring that international shipping lines continue to call at them, thereby providing a stable revenue base.

If conferences are losing their overall market power, do not dominate Canadian trades and provide adequate service options for shippers, there is no economic rationale for excluding them from Canadian trades.

NORTHERN MARINE SERVICES

The purpose of this section is to give an overview of the northern marine resupply services, which are provided by federally regulated carriers operating in two areas, the Mackenzie River system and the Lake Athabaska system. The regulatory legislation is found in Part V of the *NTA, 1987*, and the monitoring and regulating authority is the Agency.

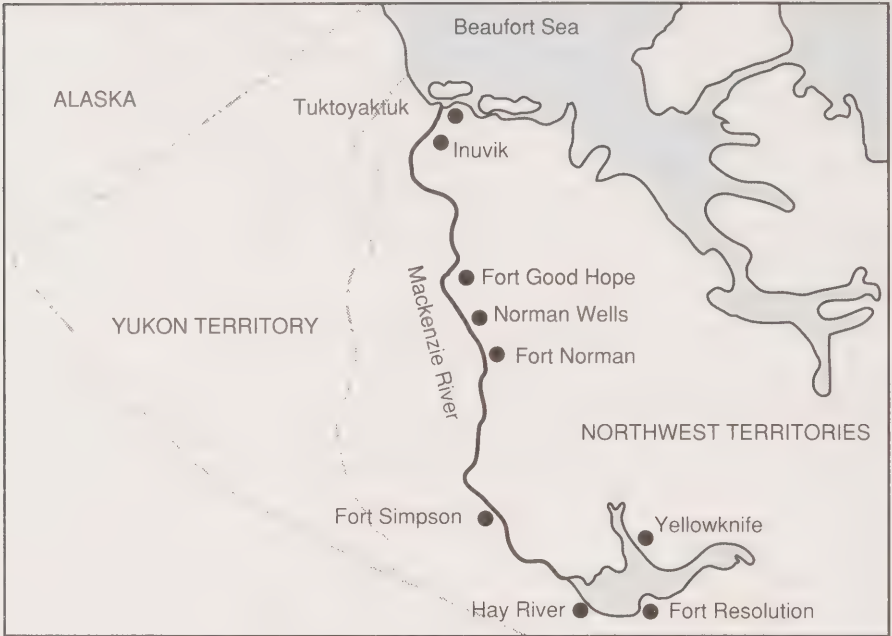
The Mackenzie River system encompasses those communities resupplied by water transport within the watershed of the Mackenzie River, as well as communities located in the Western Arctic from the Alaska-Yukon border in the west to Spence Bay in the east. The Lake Athabaska system includes those northern Alberta and Saskatchewan communities located on or near the shores of the lake.

The northern marine operating environment is characterized by a number of elements which make it distinct from other transportation regimes and tend to make marine transportation operations unique.

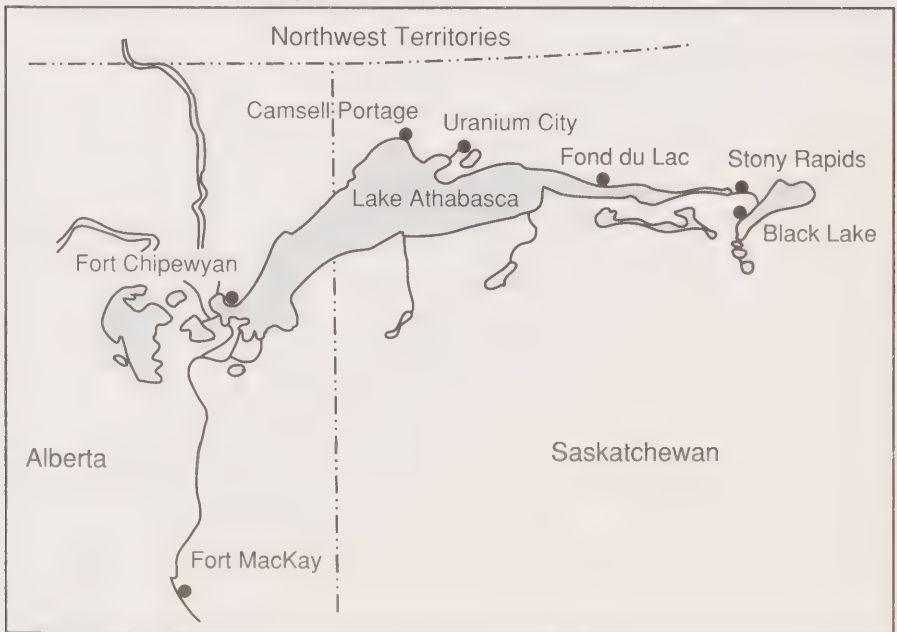
The remote regions serviced in both systems have a very small population base spread out over a vast area. The road system is scarcely developed, leaving communities to rely on air and marine services for a majority of the supplies vital for their survival. The demand for water transportation in this region originates from two sources. The first is the annual resupply of the permanent and semi-permanent settlements in the regions, with the primary products being bulk diesel fuel, used for generating electricity and operating equipment, and general cargo. Over the past 20 years, this has been a relatively stable source of demand, rising steadily as the general population grew. However, during the last few years it has reached a plateau, reflecting the stagnant economic growth of the areas. The other source of demand is a highly volatile resource sector which is currently in decline.

The effect of a shrinking cargo base along with variable incremental tonnage makes it difficult to schedule equipment maintenance and capital investment programs.

Mackenzie River System



Lake Athabasca Region



A combination of geographic and climatic conditions in the regulated areas, along with the variable water levels, imposes various operating restrictions on carriers not found elsewhere. The impact on shippers and carriers can be summarized as follows:

- Limited port infrastructure in terms of berths, wharves, navigational aids, ice breaking capability and weather and ice forecasting.
- Limited terminal facilities offering adequate protection for perishable and delicate cargoes.
- A very short operating window (two and one half months in the arctic, five months on the Mackenzie River, and seven to eight months on Lake Athabaska).
- The need for specialized high ice-class shallow draft vessels, where deadweight carrying capacity is limited, due to the increased steel plate required and the shallow draft design.
- High cost of carrier tonnage due to its specialized design, significantly increasing comparable capital costs for the carriers.
- Unpredictable weather conditions requiring ice-breaking support, changes to scheduling, and often unexpected changes to the shipping season.

The result is that marine transportation in this environment is fraught with uncertainties and is more costly to provide than in other regions. This leads to industry concentration, with technology, limited market size and environment serving as natural barriers to entry.

Since 1945, the federal government has assumed the role of regulating maritime activities on both the Mackenzie River and Athabaska systems.⁷

The rationale for economic regulation arose from the almost complete dependence of the isolated communities, located on both the river and lake systems, on water transport services. While some of the commodities could bear the cost of air transport and all-weather highways linked some settlements with major centres, the tug and barge transport systems provided the overwhelming proportion of the annual resupply requirements for the remote communities.

The need to ensure adequate services to all communities, including the smaller remote ones which were less economically attractive to the carriers, resulted in a regulatory philosophy which placed more emphasis on the availability and reliability of scheduled services than on the promotion of a competitive environment. This primary objective of ensuring a satisfactory level of scheduled services to all communities resulted in the licensing of a few scheduled carriers to undertake the resupply function.

with licensed carriers being protected from unlicensed operators and operating in a system with a tightly controlled supply of carrier capacity.

Changes from Previous Legislation

The *NTA, 1987* was an attempt to streamline the regulatory process reflecting the deregulatory philosophy of the government and it introduced some major changes over the previous legislation.

Of major importance was the deregulation of the marine movements of national defence cargo and of cargoes in support of the exploitation and exploration of non-renewable resources in the North. With respect to the ongoing resupply operations, those carriers who had provided services during the previous five years were given grandfather rights to continue.

The other significant change was the alteration of the tariff provisions which required the carriers to file with the Agency the actual tariffs being charged and to publish these tariffs in the communities being served. The previous legislation had the regulatory body approve a maximum standard tariff. The impact of this difference is that the regulatory body now accepts all filings unless an objection is made by an affected party. Rates and service contracts are not reviewed unless there is a complaint filed by stakeholders in the system.

In general, the changes in the 1987 legislation have been well received by shippers and carriers in both of the systems. All parties agree that water transportation in these regions should continue to be regulated in order to provide adequate service and to ensure that, in the long term, there is sufficient tonnage available. The requirement for long-term stability and carrier profitability is recognized by the parties in both regions, and thus free market competition is not perceived as being in anyone's long-term best interests.

The reliance of shippers on the dominant carrier in each region essentially makes them captive shippers, as other transport modes cannot meet all of their requirements. The short shipping season requires carriers to be large and profitable enough to provide essential services safely in the short time frame, and there appears to be more than adequate tonnage capacity available within the system. The increased availability of highway and trucking services offers a modicum of competition for shippers, although the resupply cargoes, especially fuel oil, can only be transported by barge.

Impact on the Mackenzie River and Western Arctic Sector

Since the enactment of the new legislation the structure of the carrier industry has not changed significantly.⁵ The major carrier continues to be Northern Transportation Company Limited (NTCL)⁹ which has over 90% of the available tonnage capacity approximately 72,500 GRT. The company has not increased the size of its fleet since 1988.

The other three minor players — Cooper Barging, Coastal Marine and Beluga Transportation — collectively control about 10% of the carrier tonnage. These companies serve primarily as complementary service providers, since they are not of sufficient size to compete effectively against NTCL.

As a requirement for carriers under the Act, NTCL continues to serve all communities on the Mackenzie river system. The cargo tonnage carried increased by almost 20% from 1987 to 1989, but has since declined. The total tonnage carried in the system amounted to 153,000 tons in 1991. NTCL provided all of the scheduled services, while the other three carriers provided unscheduled complementary service to various communities. The entire sector suffered due to the continuing malaise in the oil exploration industry, especially in the Beaufort Sea region. In all, since the enactment of the legislation in 1988, there has been little change in the levels and quality of service and in the areas and numbers of communities served.

As a result of declining activity in the oil sector, community resupply tonnage increased from 80% of the total movement in 1988 to 86% in 1991. The balance of 14% of tonnage was unregulated resource industry and defence traffic. In 1991, NTCL handled 96% of the resupply tonnage, with Cooper Barging handling the balance. Bulk fuel shipments accounted for over four-fifths of the tonnage moved. Community resupply is the mainstay of the system and due to the lack of other transport modes, will continue to require barging as the most cost-effective transport mode.

Average freight rates rose by 3 to 5% per annum during the four-year period, significantly below the Yellowknife CPI, which increased between 5 and 6.5% per annum. However, total carrier revenues declined during the past four years, due to the reduction in overall traffic.

Impact on the Lake Athabaska Region

The industry structure in this sector has not changed significantly since the enactment of the *NTA, 1987*. The region is currently served by one primary carrier (A-Frame Contracting) and two very small carriers — one licensed (MacDonald Marine) and one unlicensed (LAT). Total tonnage carried in 1991 was 10,500 tons, representing a 2,000 ton rise over previous years due to some government project work in the area.

The region has witnessed a continuing decline in traffic due primarily to the availability of electricity via hydro lines, which has reduced the need for bulk fuel shipments. While there will always be a base cargo supply, comprising bulk fuel and general cargo, the region will not grow significantly in the future. There is little resource development in the region and the population is not expected to increase significantly. There are no major capital projects envisaged at present, and the development of winter roads will likely reduce overall cargo available for barging. Currently, 3,000 tonnes per annum is shipped on winter roads between Fort MacMurray and Fort Chipewyan.

Outlook for the Future

A safe, reliable and adequate barge transportation system is essential for the resupply operations, which are vital to the continued existence of the various remote communities. Barging offers the most cost-effective transport solution in the long run, given the low levels of cargo tonnage to be carried. However, cargo supply trends do not make it a viable business in the long run unless adequate rates can be charged. The current structure is monopolistic, but this may be needed to maintain adequate service to the communities, with regulatory requirements necessary to avoid destructive competition through over capacity. There has been very little investment in new vessels and there is the possibility that the current fleet will be unable to meet future demand.

Great Lakes and St. Lawrence Seaway

The current Great Lakes fleet comprises 13 owner/operators controlling 111 vessels. The majority of these vessels (78) are dry bulk carriers built for carrying grain, coal, iron ore, potash, salt and stone within the Great Lakes and St. Lawrence River. The backbone of the Great Lakes trades is the transport of grain from Thunder Bay and the Lakehead to export facilities on the lower St. Lawrence River, primarily at Quebec. Vessels return with iron ore to feed the steel industry in Hamilton. Coal is transported from Thunder Bay and U.S. lake ports for Ontario Hydro and the Canadian steel mills.

Grain, the most important cargo, has seen its volume fall from 22 million tonnes transported in 1982 to a low of 11 million tonnes in 1989. The Pacific ports are increasing their share of Canadian grain exports at the expense of the Great Lakes. This is mainly due to the increasing importance of the Far East as a destination for Canadian exports, as well as the decline in the traditional markets of the U.S.S.R. and Western Europe.

There are 25 tankers and barges, primarily used for the carriage of petroleum products, chemicals and other bulk liquids. There are also eight general cargo vessels and barges, used for the transport of general cargoes, asphalt and special cargoes.

Since 1980, the fortunes of the Great Lakes fleet have declined significantly. The number of vessels has declined from 145 to 111, with only 25% of the dry bulk carriers fully active throughout the 1992 season.¹⁰ There has been a decline in the number of operators from 18 to the present 13, due to mergers and fleet rationalizations. The age of the vessels has increased significantly, with the current average age of bulkers exceeding 25 years and that of tankers 20 years. The increasing age of the fleet means more expensive repairs and replacement parts, as breakdowns tend to increase with age. This leads to an increased risk of downtime, less reliability, higher costs and a less competitive mode of transport.

Cost pressures, including tolls, dues, pilots and tugs have increased by over 50% during the 1980s. These impact directly on the ability of the fleet to charge competitive rates and still enjoy some profit. The most significant statistic revealing the state of the industry is that there have been no additions made to the fleet during the past six years.

The excess vessel capacity, the declining level of cargo tonnage in the grain and steel industry trades, and the unattractive cost and availability of Canadian vessel construction have eliminated the economic rationale for investing in new vessels.

Factors Affecting St. Lawrence Seaway System

The St. Lawrence Seaway system is the major interior Canadian waterway, connecting the Great Lakes with the eastern seaboard via a river and locks system. It was built in the 1950s and has been operating since 1958 as a conduit for Canadian grain exports, bulk cargoes for the Canadian steel industry and imports from Europe.

Currently, the system is not in a healthy state. There has been a precipitous decline in traffic in the system, especially compared with the peak tonnages achieved in 1979. The number of foreign vessels using the system has declined from 918 in 1980 to 429 in 1991. Tonnage movement has declined by 35% since 1980, totalling approximately 40 million tonnes through each of the lock systems in 1990.

The Seaway route compares unfavourably with cost competitive alternatives. The Mississippi barge system, utilizing a toll free, nationally supported waterway to the U.S. Gulf, competes for eastern grain cargoes. The deregulated U.S. rail system incorporates unit trains from the mid-west to the eastern tidewater and it appears that an increasingly aggressive Canadian rail system will soon compete in a similar fashion.

A number of major factors have contributed to the decline of the viability of the system. The Seaway system is negatively affected by its limited operating season of approximately 8.5 months, and by the fixed dimensions of its locks, since ocean vessels were much smaller when it was conceived than they are today. When the Seaway opened, 60% of the world dry bulk fleet could use it, compared with the 7% today. A multi-billion dollar investment to increase the size of locks would be difficult to justify given the current and projected levels of traffic.

The operating costs of the system, including tolls, tonnage taxes and dues, have increased significantly during the past five years, as have administrative costs. The costs for compulsory pilotage services have risen dramatically in recent years, up 28% over the past three years. While the cost of these services is small compared with overall voyage costs (1-2%), the impact is still significant on carriers' profit levels. The current trend toward cost recovery for Coast Guard services, especially ice-breaking, will make shipping via the lower St. Lawrence even more expensive.

Future of the Great Lakes Fleet and Seaway System

The future of the Great Lakes fleet is decidedly grim given the conditions faced in the market place. While certain factors such as changing international markets cannot be altered, other cost factors can be mitigated. If current trends persist, by the year 2000 the dry bulk and self-unloader fleet could be reduced from 78 in 1991 to 32 vessels and conceivably down to 15 vessels if there are no adequate replacements.¹¹ In effect, the St. Lawrence Seaway will not be a viable trading route in the long term.

Such a development would have major implications for the Lakes-based industries such as steel and power generation, which are dependent on large volumes of dry bulk commodities. These industries would encounter increased transportation costs and capacity constraints, which could either force them to sources elsewhere for raw materials or drive them out of business.

The full utilization of available Seaway capacity is an attractive use of capital resources when compared with the injection of new capital resources into other transportation infrastructures. There is a strategic value in retaining a high volume system in place as an alternative for Canadian export via the west coast or the Mississippi River. A viable eastern transportation route will be critical for handling any increases in grain volumes, since current western capacity and market potential is limited due to lack of infrastructure.

Finally, shipping by water is the most environmentally friendly mode for large scale bulk commodity transport. The negative environmental impact of any significant modal shift to rail or truck must be carefully examined.

CANADIAN PORTS SYSTEM

Seaports in Canada are currently facing rapid and dynamic changes in their operating environments. Fundamental changes in international trade patterns, vessel size and shipping company operating structures threaten the continued commercial viability of many container ports, especially in eastern Canada. The structure of the Canadian ports administration system itself is not conducive to a flexible response to changing global trade patterns.¹²

The overall responsibility for ports lies with the federal government, as set out in the *Constitution Act*. Ports in Canada have always been placed under public administration due to their inherent structure as spatial monopolies. While they have served primarily as a landlords in the past, port authorities today need to take more proactive measures to ensure their own competitiveness and survival.

There are currently three tiers in Canadian port administration: Canada Ports Corporation (CPC), Harbour Commissions and public harbours and ports under Transport Canada. The CPC controls 15 ports, of which seven are local port corporations (LPC). The LPCs are the largest ports, and include Halifax, Montreal and Vancouver. Their boards of directors are appointed by the government and they have a significant degree of autonomy. However, they do not have the capacity to raise finance independently or accumulate reserves and thus must rely on the federal government for all their capital funding.

There are nine harbour commissions, five located on the Great Lakes and four on the west coast in British Columbia. The directors of these commissions largely represent local interests, and they report to the Minister of Transport. The Commissions have always acted autonomously and have the right to accumulate reserves, although they must obtain federal approval for major capital spending projects. Because of their

proximity to many LPCs, potential conflicts arise as to which facilities best serve shippers and receive the necessary funding for investment.

The public ports and harbours, currently numbering 526, are generally very small and serve local interests only. They lost \$64 million in 1991, and will likely never be profitable due to the size of the communities they serve. However, some are necessary for community survival, especially in remote regions, while others primarily serve recreational needs.

The controversy surrounding Canadian ports administration is based on the inability of the large seaports to respond adequately to external events and economic forces. Canadian ports currently face intense competition from U.S. ports, which have invested heavily in terminal and port equipment, service larger hinterlands, benefit from greater economies of scale, and can independently react to service requirements. They also have the advantage of being able to levy taxes on their port communities, as well as to borrow funds commercially and issue bonds.

Canadian ports, especially in the container trades, have to compete against hub and spoke distribution systems based in U.S. ports, which are able to accommodate the jumbo vessels servicing the major international trade routes. Vancouver and Halifax are especially exposed to this form of competition, having the physical capacity to accommodate the vessels, yet being increasingly unable to induce the carriers to use the port due to port charges, high inland transport costs and other costs outside the control of the CPC. There is obviously a need for these ports to be able to react to changes in the market place and price themselves in a competitive manner. As international trade is "port blind," ports and the transport systems servicing them must be able to compete on price and service levels to attract the enough traffic to ensure their viability.

Canada has a history of financial troubles arising from centralized ports administrations, especially in terms of debt loads foisted on the federal government. The question of centralized control rests on judgement: whether the benefits achieved through consolidation, reduced overheads and a centralized investment policy, which considers national as well as regional concerns, outweigh the benefits of flexible operations and investment decisions.

The solution to this problem requires a great deal more analysis and could require a major overhaul of the Canadian ports administration system. The current situation of overlapping jurisdictions, costly centralized administration and lack of investment flexibility at the individual port level has a negative impact on the economic viability of ports, as well as the industries they serve.

SUMMARY

1. Canada does not have an international merchant marine.
2. There is no evidence that international liner conferences have abused their dominant position or have interfered with independent liner operators.

3. Marine services in the Mackenzie River and Lake Athabaska regions need to be regulated in order to provide adequate service and to ensure that, in the long term, there is sufficient carrier tonnage available.
4. The commercial operation of the Great Lakes fleet is not subject to any form of economic regulation and viability is determined by the level of economic activity within the region and the relative competitiveness of operations. If the present trends affecting the competitiveness of the St. Lawrence Seaway system continue in the long term, the system may not be a viable trading route for Canadian exports and imports.
5. The current situation in the Canadian ports organization of overlapping jurisdictions, costly centralized administration and lack of investment flexibility at the individual port level has a negative impact on the economic viability of ports as well as the industries they serve.

NOTES

- 1 This incident occurring in 1959 required a shipper to honour a loyalty contract with a shipping conference, even though the conference carrier could not service the shipper's port. This abuse of market power led to an inquiry into conference practices and subsequently to the establishment of conference legislation.
- 2 Carriers may enter into agreements regarding loyalty contracts providing that they:
 1. may be terminated by either party at any time after 90 days written notice;
 2. use tariffs including a dual rate system with no contract rate less than a non-contract rate by more than 15% of that contract rate;
 3. make no provision for rebates; and
 4. do not require the shipper to ship all of his goods by that conference as a standard term or condition.
- 3 *National Transportation Agency, Annual Review 1991*, p.160.
- 4 Sletmo, G. *The Canadian Shipping Conferences Act: Issues and Roles for Shippers and Shipping Conferences*, 1991, p.4.
- 5 Data found in both *NTA Annual Review 1991* and Sletmo 1991.
- 6 This argument is provided by a number of stakeholders and academics and cannot be attributed to one particular source.

- 7 In earlier years, the Department of Public Works assumed responsibility for maintaining the physical infrastructure including dredging. In 1955, the Department of Transport assumed this role, which is carried out by the Canadian Coast Guard. By the early 1980s, the economic regulation of both regions was under the jurisdiction of the Water Transport Committee of the Canadian Transport Commission; it was transferred to the National Transportation Agency in 1988.
- 8 All data in this section as per *NTA Annual Review, 1991*.
- 9 This company is jointly owned by two corporations, the Inuvialuit Development Corporation and Nunasi Corporation, thus making the Inuvialuit peoples of the Western Arctic and the Inuit of the Central and Eastern Arctic the beneficial stakeholders.
- 10 As per *Canadian Shipowners Association Annual Report, 1992*, and statements by industry executives. A number of vessels capable of operating in the Great Lakes are either permanently laid up or engaged internationally.
- 11 As per speech by David K. Gardiner at the International Great Lakes St. Lawrence Mayor's Conference 1992.
- 12 For a further discussion, see M.C. Ircha, "Institutional Structure of Canadian Ports," *Maritime Policy and Management*, March 1992.

7

Intermodal Transport

The widespread implementation of an intermodal approach to the movement of domestic and export/import freight has been one of the most significant developments on the transportation scene in North America in recent years. For purposes of this chapter, intermodal transport is defined as the movement of unitized freight, either in containers or highway trailers, on a single bill of lading or a single waybill, by two or more modes of transport in a continuous operation.

Chapter 7 consists of four sections. It commences with a discussion of the current status of regulation with regard to intermodal transport. It then proceeds to a brief examination of the importance of intermodalism in Canada. This is followed by a discussion of the likely future developments in intermodalism. The chapter concludes with a brief summary.

STATUS OF REGULATION

The *NTA, 1987* contains virtually no provisions with regard to intermodal transport per se. While section 3, the policy statement in the Act, stresses both competition between and within modes, it makes no reference to intermodal transport or competition with and between "intermodal systems."

Only four sections in the Act are concerned with intermodalism. The first of these is section 45, which requires that a rate quoted for an intermodal movement be "unbundled" at the Agency's request into components charged by each of the modes involved, in order to enable the Agency to determine if these rates conform to the law.

The second reference to intermodal transport is contained in section 47(b)(ii), which states that the provisions for mediation and arbitration between shippers and carriers (as provided for in sections 48 to 57) only apply to containers which "arrive by water at a port in Canada served by only one railway company for further movement by rail or by rail at such a port in Canada for further movement by water." Other intermodal movements involving either trailers or containers on flatcar are specifically excluded from the provisions of sections 48 to 57.

The third reference to intermodal transport is contained in section 135(3), which specifies that provisions with regard to competitive line rates only apply to containers that arrive at a Canadian port "by water for further movement by rail or by rail for further movement by water." Again, all other movements of trailers or containers on flatcar are explicitly excluded from competitive line rate provisions.

The fourth reference is contained in section 145(5)(a), which requires railways to provide facilities at the same rates and on the same conditions to all for-hire truckers as they provide for the carriage of trucks and trailers by a company which they control. section 145(5)(b) permits the Agency to disallow any rate or tariff that does not comply with this and require the railway to substitute a new rate or tariff.

While intermodalism was not explicitly covered by the 1987 legislation, provisions in the Act with regard to individual modes have had a significant bearing on intermodal transport. Perhaps the most important specific modal provision in terms of its impact on intermodal transport was the introduction of rail confidential contracts. The number of such contracts associated with intermodal movements increased from 4 in 1988 to 34 in 1989 and 110 in 1991.¹ The relaxation of entry regulation in the truck mode which was achieved through the 1987 legislation also had a positive impact on intermodal transport.

On the other hand, section 5(2), a new provision in the *SCEA, 1987*, permitted only individual shipping lines, as opposed to the conference collectively, to negotiate the inland portion of through rates with the railways. This may have had a detrimental impact on intermodal movements via Canadian ports of overseas containerized cargo.

The Shipping Federation of Canada stated in its submission that:

In light of the increasing importance of door-to-door service and the need to improve the competitiveness of the Canadian intermodal system, we would also suggest that the Review Commission seriously consider suggesting revisions to those provisions of SCEA which do not allow conferences to negotiate with inland carriers on behalf of their members. Such collective negotiations with the railways could produce lower rail oncarriage rates and the improvements in service quality.

(Shipping Federation of Canada, p.15)

This position was supported by Canada Ports Corporation (CPC) in their brief which noted:

In particular, subsection 5(2) should be amended to permit two or more ocean carriers with an operating alliance to negotiate contracts jointly with the railways.

(CPC, p.13)

THE IMPORTANCE OF INTERMODALISM IN CANADA

Intermodal transport in Canada can be separated into two distinct segments. The international component involves ocean and land carriers; the domestic and transborder activities involve railways and trucking (and marine transport in the case of certain movements in Atlantic Canada and Vancouver Island). While both components had their origins in the early 1950s, they are quite different both in terms of equipment and

organization. The international segment of the industry has utilized standard ISO 20-foot and 40-foot marine containers right from the beginning. Furthermore, North America has always been treated as a single continental market by the international shipping industry, which has played a major role in the development of international intermodalism. In contrast, trailer-on-flatcar (TOFC) remained the dominant technology in domestic intermodal transport until the beginning of the 1980s. Even after the introduction of container-on-flatcar (COFC) into the domestic trade, no standardized dimensions emerged in this market.

The development of intermodalism in Canada over the past decade has been influenced largely by market forces and initiatives originating outside the country. The factors which have had the greatest impact on intermodalism in Canada include developments on the intermodal scene in the United States and major changes in the liner shipping industry all over the world.

Canadian railways adapted more successfully to intermodal transport in its early days than did their American counterparts. The situation in the U.S., however, was drastically transformed by the deregulated environment established by the *Staggers Rail Act* of 1980 and the *Shipping Act* of 1984, which provided a major thrust towards intermodalism. As a result, by the end of the 1980s, the U.S. had caught up and passed Canada in exploiting the advantages of intermodalism. The growth of double-stack service has been spectacular since its introduction in the U.S. in 1985, and this technology has achieved a dominant position in the major east-west corridors. As well, contracts between railways and individual shipping lines have resulted in the establishment of various dedicated services to move containerized cargo between hubs in the interior of the continent and on the east coast and various west coast ports. Until very recently, all major double-stack services to Canada consisted of extensions of U.S. operated services from Chicago, with only the final leg of the movements involving a Canadian railway.

With regard to the liner shipping industry, the major development which has impacted on intermodalism in Canada has been the steady increase in the size of cellular container ships. As container ships get larger and hence more expensive to operate, shipping lines will attempt to turn these vessels around as quickly as possible, thus reducing the number of ports at which their ships call. Since major U.S. container ports handle substantially higher volumes of cargo than Canadian ports, it is obviously advantageous for liner vessels to call at U.S. ports and to serve the Canadian market through these American gateways. A parallel trend has been for liner companies to only call at one North American coast, particularly with respect to the Far East trade, and to divert cargo from the interior and from the east coast via double-stack trains to west coast ports.

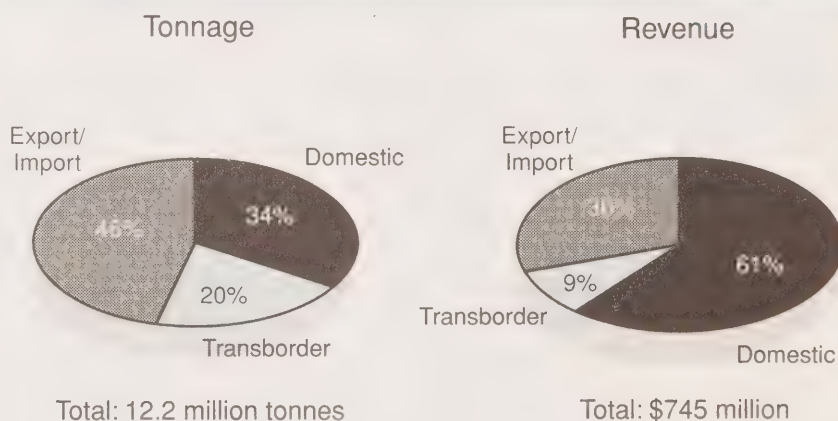
Rail Intermodal Traffic

All data relating to rail intermodal traffic in this chapter have been obtained from the National Transportation Agency.² The total volume of intermodal traffic carried by CN and

CP in 1991 amounted to 12.2 million tonnes, generated 23.7 billion tonne kilometres; and accounted for revenues of almost \$745 million for the two railways. As would be expected, intermodal traffic accounts for a much greater proportion of total revenue than of total tonnage. In 1991, the 6% of total tonnage represented by intermodal freight accounted for 13% of the railways' total revenues.

Of the three categories of traffic — domestic, export/import and transborder — the export/import component has been the most important since the mid-1980s in tonnage terms. However, domestic traffic is by far the most important source of intermodal revenue to the railways, significantly exceeding the revenue generated by the export/import segment of the market. There is considerably higher revenue per tonne on domestic traffic than on export/import traffic (\$111 versus \$39), which is only partly the result of greater average length of haul (2,700 kilometres versus 1,900 kilometres) in the domestic segment. Figure 7.1 shows the three components' shares of rail intermodal traffic.

Figure 7.1
Components of Rail Intermodal Traffic, 1991



SOURCE: National Transportation Agency

Truck Intermodal Traffic

Information relating to the volume of intermodal traffic carried by the trucking industry is unfortunately not available and can only be inferred. By definition, the trucking industry has to be involved in the movement of virtually all of the domestic and transborder traffic which is captured in the rail data base. Quantifying intermodal export/import movements which involve only the truck and marine modes, which appears to be fairly substantial, is problematic. The only hard numbers available are Ports Canada estimates of the proportion of the container traffic which moved by truck from the ports of Montreal and Vancouver in 1990 and 1989. It appears that in those two years 45% of Montreal's³ and 57% of Vancouver's container traffic was carried by truck.⁴ Similarly, one can assume that the 13% of container cargo moving through the port of Halifax that originated from or was destined for shippers in the Atlantic region also moved by truck.⁵ However, these figures cannot be taken as definitive, given the rapid pace of change in intermodal transport systems.

The surveys carried out by the Agency as part of its annual reviews also indicate significant participation by the motor carrier industry in the movement of intermodal freight. In 1991, 56% of the motor carriers responding to the Agency's survey reported that they were engaged in providing intermodal services. Intermodal activities for the respondents in the sample accounted, on average, for 10% of their total traffic volumes and revenues.⁶ If the above percentages are extrapolated for the trucking industry as a whole, its involvement in intermodal transportation is clearly quite substantial. The potential importance of trucking with regard to export/import traffic was shown when CAST shifted all of its container traffic between Toronto and Montreal from rail to truck in 1990. This CAST traffic is estimated to amount to some 20,000 twenty-foot-equivalent units (TEUs) a year.⁷

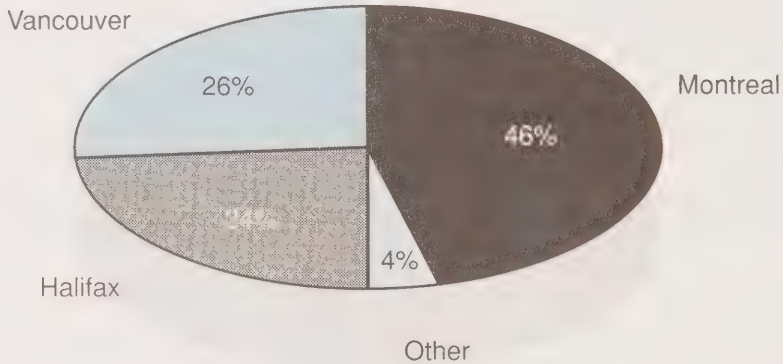
Container Traffic at Canadian Ports

Statistics relating to the volume of containerized export/import cargo handled at Canadian ports as well as data relating to the diversion of Canadian container traffic via U.S. ports and of American traffic via Canadian ports have been obtained from the Canada Ports Corporation.

The total volume of containerized traffic handled by Ports Canada ports amounted to 12.6 million tonnes in 1991. Except for very small volumes of domestic containers shipped to or from Newfoundland and Prince Edward Island on the east coast and Vancouver Island on the west coast, all of this traffic originates from or is destined for overseas points. As shown in Figure 7.2, three ports accounted for 96% of all containers moving through Canadian ports.

The importance of containerized traffic to Canadian ports is illustrated by the fact that, while this cargo accounts for only 7% of the total tonnage handled by ports, it represents some 25% of their total revenues.

Figure 7.2
Container Tonnage at Canadian Ports, 1991



SOURCE: Canada Ports Corporation.

A significant volume of overseas container traffic to and from Canada also moves through U.S. ports. In 1991, this diverted traffic amounted to some 2.3 million tonnes or 20.5% of Canada's total international containerized traffic. This diversion of Canadian traffic via the U.S., however, was offset by the diversion of approximately 2.7 million tonnes of American cargo via Canadian ports, giving Canada an overall positive net balance of some 400,000 tonnes.⁸ This positive balance is entirely due to the diversion on the east coast (primarily cargo moving to and from the U.S. midwest via Montreal). On the west coast, Canadian cargo via American ports exceeds U.S. cargo via Canadian ports by a wide margin.

DEVELOPMENTS IN THE 1990s AND BEYOND

Since the two national railways will continue to occupy a central role in intermodal developments in Canada, the discussion in this section will focus to a large extent on activities involving the railways.

Expansion into the Continental Market

Both CN and CP have recently taken steps to play a bigger role in the North American intermodal scene and to counteract pressures emanating from the U.S. Access to Chicago, the undisputed intermodal hub in North America, is a key to achieving this objective.

As part of its strategy, CN assumed operational control over its subsidiary, Grand Trunk Western, and recently negotiated an agreement with Burlington Northern to provide the link between Duluth and Chicago. As of November 1, 1992, CN launched a double-stack service between Vancouver and Chicago. With the completion of its new tunnel between Sarnia and Port Huron in 1994, CN will also have improved access between Chicago and eastern and central Canada for double-stack service. In addition, CN has also entered into a partnership with APL Land Transport Services, a subsidiary of American President Lines, to provide the first intermodal container service between Canada, the U.S. and Mexico over the tracks of the Union Pacific Railroad.

CP Rail has adopted a similar strategy of competing in the North American market. Perhaps the most significant step taken by CP to position itself in the continental market was its purchase of the Delaware and Hudson Railway (D&H) in 1990. The acquisition of the D&H, along with the integration of the Soo Line operation, has permitted CP to expand its presence in the U.S. market and places it in a good position to take advantage of the expected growth in north-south traffic flows. These acquisitions, combined with its Canadian based rail system, make CP the only transcontinental railway in North America that is able to serve directly both the western and eastern seabords. In addition to access to port facilities in New York and Philadelphia, its U.S. acquisitions also provide CP with key interchange points such as Chicago, Kansas City and Minneapolis. CP will be able to offer double-stack service between Vancouver and Chicago when it completes a major program to increase vertical clearances in some 47 tunnels on its mainline through British Columbia.

Wholesale versus Retail Marketing

As CN and CP extend their penetration of the American market, they will have to consider major changes in their marketing approaches. In Canada, the railways have always been involved in wholesaling their intermodal services to truckers and ocean carriers as well as retailing them directly to their customers. There is a general perception, however, that both CN and CP are primarily retailers. In contrast, U.S. railways are generally not involved in retailing their intermodal services but wholesale them to shipping lines, shipper agents, truckers or other third parties.

There are a number of major factors which have made it feasible for the Canadian railways to market their intermodal services on a retail basis directly to shippers. Perhaps the most important of these is that both CN and CP operate national networks that extend from coast to coast and that enable them to serve customers virtually anywhere in the country without having to interline with other railways. This fact, combined with the geographic concentration of the Canadian population in a relatively small number of centres close to the border, has made it quite easy for the railways to cover the entire market with a small national sales network with offices in only a few major cities.

In the future, the Canadian railways may have to follow the lead of the American railroads and rely to a greater extent on wholesale marketing as they integrate their Canadian and U.S. operations to better serve the entire continent. They will no longer be able to rely on their own sales networks to achieve penetration in the continental market or to obtain sufficient traffic to fill the double-stack services that they are planning to provide. Furthermore, as they expand into markets further away from the border states, they will find it increasingly difficult to coordinate moves with several railways, as well as with trucking firms, in order to serve their customers.

The railways may also have to rely on wholesale marketing to fill the all-Canadian double-stack services that have recently been established by CN and to a lesser extent by CP. Due to the relatively low traffic volumes on most Canadian corridors, there is a need to combine domestic and international containers in the same double-stack trains to achieve the economies inherent in double-stack systems. In such a situation, marketing becomes critically important to the viability and success of these intermodal operations.

International Segment

The international component of intermodal transport in Canada will continue to be dominated by market forces and initiatives originating outside the country. The driving force behind intermodalism in the international segment will be the emergence of increasingly larger shipping lines and consortia on the major liner trades of the world. Fewer carriers will control an ever increasing share of the container market as rationalization continues in the liner shipping industry through mergers, slot-charter arrangements and the operation of joint services on certain routes. Already in 1991 the container trade was dominated by 15 so-called mega-carriers, each of which handled more than half a million TEUs a year.⁹ The size of these mega-carriers is likely to increase significantly over the next decade or so.

The second major development on the international scene that will have a major impact on intermodalism in North America is the continuing increase in the average size of container vessels. The average size of container ships on the major trades is currently 2,000 to 2,400 TEUs. It is expected to reach 3,000 TEUs by the end of the decade¹⁰ and could well be in the range of 4,000 to 5,000 TEUs by the early years of the 21st century. In addition, there is the increasing tendency on the part of the mega-carriers to control all aspects of their intermodal operations. This includes direct involvement in double-stack rail services, the management and operation of their own rail terminals, the establishment of their own networks of agencies in North America (as has been done by the Japanese lines), and the long-term leasing of exclusive use of berths and terminals at ports. All these attempts on the part of shipping lines to assume control over the entire intermodal transportation chain are currently taking place in the U.S. and are likely to intensify.

These trends with regard to the international component of intermodal transport obviously have major implications for the development of intermodalism in Canada. The end result of the increasing concentration of the liner shipping industry, along with the increase in the average size of vessels, will be a tendency on the part of lines to call at as few ports as possible in North America, preferably only a single port, in order to maximize efficiency. This places the major Canadian ports and hence an all-Canadian intermodal route at a severe disadvantage.

With regard to Halifax, the advantage of its being an ice-free deep water port just off the great circle route is, to a large extent, offset by its great distance from the principal North American origins and destinations for international cargo. Consequently, Halifax finds itself having to compete with U.S. east coast ports. While Montreal is close to the major markets both in Canada and the U.S., it cannot accommodate anything much larger than the 1,800 to 2,000 TEU vessels that currently call at the port.

That leaves Vancouver as the only major Canadian container port in a reasonably good position to compete in the continental market, especially if the current plans proceed for the construction of the proposed container terminal at Roberts Bank. With the recent investments by the two national railways, Vancouver now has excellent access to the Chicago market. However, Vancouver still has to induce shipping lines to make it their first port-of-call and faces strong competition from Tacoma and Seattle, both of which have the advantage of handling significantly larger volumes of container traffic.

The one area where Canada would have a distinct advantage over the U.S. with regard to intermodalism is the potential development of a land-bridge between the Far East and Europe across the North American continent. With the increase in the number of post-Panamax vessels, which are too large to transit either the Panama Canal or the Suez Canal, and the uncertainties associated with the trans-Siberian land-bridge due to the disintegration of the former Soviet Union, the idea of a North American land-bridge for container movements between Asia and Europe is becoming more attractive. Canada would have two advantages over the U.S. if such a land-bridge were to materialize. First, Canadian railways can provide direct coast to coast services without interchanges and the extra cost and delays associated with them, which would be required at Chicago by an American land-bridge. Second, a land-bridge across the continent from Vancouver to Halifax would offer a significant advantage in terms of sailing time over an American route.

Domestic and Transborder Segment

Until recently, the developments in intermodalism in North America have been influenced to a large extent by the marine container. There are indications that over the next decade or so the major innovations in intermodalism may be related to containerization in the domestic and transborder segments.

Both CN and CP are increasingly committed to getting out of trailer-on-flatcar (TOFC) and changing their domestic and transborder operations entirely to container-on-flatcar (COFC). Of even greater importance, however, is that a similar trend appears to be taking place in the U.S., with major truckers equipping themselves with domestic containers that can be used interchangeably for intermodal or all-highway services.¹¹ J.B. Hunt, who operates one of the largest trucking fleets in the U.S. and is one of the leading advocates of the move to domestic containers, is reportedly planning to buy some 10,500 containers (evenly split between 53-foot and 48-foot containers) and between 13,000 and 14,000 chassis.¹² Such a move from trailers to containers by the major truckers in the U.S. is quite likely to result in the widespread expansion of the domestic container into the whole North American intercity trucking market.

The integration of the domestic and transborder intermodal transport systems in Canada and the United States into a single North American continental system over the next decade poses a significant threat to Canadian intermodal operations. Not only are the Canadian rail routes, to a very large extent, in an east-west orientation, but any shift in emphasis to north-south flows will also bring the Canadian intermodal systems into greater competition with the more highly developed U.S. systems. In this connection, the role of the trucking industry in intermodal transportation is of particular concern. A number of major U.S. truckers, such as J.B. Hunt, Consolidated Freightways, Schneider National and North American Van Lines, have entered into alliances with the larger railways and assumed the role of third parties who market intermodal services to the shipping public.

In order to maximize the benefits of the expected increasing importance of transborder intermodal movements in the future and to compete effectively on the North American intermodal transport scene, the Canadian railways will have to forge alliances with major trucking firms or other third parties in the U.S. and have these partners retail their intermodal services in the continental market.

SUMMARY

1. The development of intermodalism in Canada over the past decade has been influenced primarily by market forces resulting from changes that have taken place outside the country, and this will continue to be the case in the future.
2. The Canadian railways may have to shift their focus from retail to wholesale marketing of their intermodal services to compete with U.S. carriers on the North American market.
3. With regard to the international component of intermodal transport, the tendency for shipping lines to call at as few ports as possible in North America places the major Canadian ports and an all-Canadian intermodal route at a severe disadvantage.

4. Developments in intermodalism in North America in the past have been largely dominated by the marine container. In the 1990s, the major innovations in intermodalism may well be related to the land use of containers in the domestic and transborder segments.
5. Over the next decade, both the international and the domestic segments of intermodal transport in Canada and the United States will become more and more integrated into continental systems. This poses a significant threat to Canadian intermodal systems, which will face greater competition from the more highly developed U.S. systems.

NOTES

- 1 National Transportation Agency, (1991), *Annual Review 1991*, p.206.
- 2 The major shortcoming of this data base is that it only covers intermodal traffic carried by CN and CP and thus significantly understates the volume of intermodal traffic carried by the rail mode. It does not include traffic moved by other railroads such as BC Rail, Burlington Northern, and possibly other U.S. railways that may have running rights over CN and CP tracks, particularly for export/import traffic to and from the ports of Montreal and Vancouver.
- 3 Canada Ports Corporation, (1991), *Towards a Canadian Intermodal System: Recommendations for Change*, The Final Report of the Container Competitiveness Committee, p.32.
- 4 *ibid.*, p.38.
- 5 *ibid.*, p.24.
- 6 National Transportation Agency, *op. cit.*, p.206.
- 7 Slack, B., (1991), *Intermodal Developments Monitor, 1990*, TP 10495-E, Transport Canada, p.6.
- 8 Unfortunately, figures for U.S. diversion via Canada are only available in TEUs. In 1991, this diversion amounted to 267,000 TEUs. Assuming an average weight on 10 tonnes per 20-foot container, some 2.7 million tonnes of U.S. cargo was moved via Canadian ports.
- 9 Slack, B., (1992), *Intermodal Developments Monitor 1991*, TP 10495-E, Transport Canada, p.11.

- 10 Olsen, B., (1992), *Future Directions for Sea Going Freight*, Presentation at Cost-Effective Freight Transportation Seminar, Toronto, May 26-27, 1992.
- 11 One of the major advantages of shifting from highway trailers to such interchangeable domestic containers is that it enables trucking firms to benefit from the economies associated with double-stack rail movements while maintaining their flexibility of providing all-highway services.
- 12 Traffic World, (1992), "J.B. Hunt to Buy 10,500 Containers in \$200 Million Intermodal Order," August 17, 1992.

8

Transport Policy Research (I)

The mandate of the NTARC included an examination of the overall effectiveness of transport policy, as set out in section 3 of the *National Transportation Act*. This chapter addresses research on three policy issues which are not modal specific and a further three issues are addressed in Chapter 9. The issues in Chapter 8 are transport subsidies; transport and regional development; and employment and management-labour relations in transport. The first two subjects relate directly to section 3, while the third is referenced in the NTARC mandate in section 266.

1. TRANSPORT SUBSIDIES

The issue of subsidy policy is addressed in two specific sections of the *NTA, 1987*. Section 3(1)(e) requires that "each carrier or mode of transportation, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided to that carrier or mode at public expense." Section 3(1)(f) states that a carrier or mode should be fairly compensated for "the resources, facilities and services that it is required to provide as an imposed public duty."

The Act also addresses the question of subsidies indirectly in section 3(1), which declares that "a safe, economic, efficient and adequate network of viable and effective transport services making the best use of all available modes of transportation at the lowest total cost is essential...."

Level of Subsidies

Research was carried out under contract for the Review Commission by Hickling Corporation in its study entitled *Transportation Subsidies in Canada*. This involved the documentation of both direct and indirect subsidies provided by all three levels of government — federal, provincial and municipal — to the transport sector in fiscal year 1990/91.

Direct subsidies consist of payments to carriers to cover their operating deficits or to compensate them for imposed public duties. In the present chapter, transfers by the federal government to crown corporations are also treated as direct subsidies. Indirect subsidies consist of the difference between public expenditures on transport-related infrastructure and associated services on a particular mode and revenues received in the form of user charges and fuel taxes from that mode.

In the Hickling study, the implicit subsidies involved in the public provision of infrastructure are based on detailed cost and revenue calculations on both a cash flow and book value basis. Under a cash flow approach, all expenditures are treated as current costs in the year in which they are incurred. The book value approach, on the other hand, classifies operating and maintenance costs as current expenses, while capital costs are allocated over the life of the asset. While the subsidy estimates shown in Table 8.1 present both cash flow and book value figures, the discussion in the remainder of this section relates only to cash flow estimates.

Table 8.1
Transportation Subsidies in Canada, 1990/91
(Millions of Current Dollars)

	Cash Flow	Book Value
RAIL		
Federal*	1,121	1,121
Provincial	(107)	(107)
TOTAL	1,014	1,014
MARINE		
Federal	900	1,007
Provincial	96	96
TOTAL	996	1,103
AIR		
Federal	262	336
Provincial	(48)	(48)
TOTAL	214	288
ROADS		
Federal	(2,078)	(2,006)
Provincial)	(1,508)	107
Local	5,811	6,484
TOTAL	2,225	4,585
ALL MODES		
Federal	204	458
Provincial	(1,567)	48
Local	5,812	6,484
TOTAL	4,449	6,990

* Includes direct subsidies provided under the *WGTA*; if these were excluded, subsidies to rail would be \$476 million under both cash flow and book value methods.

Source: Hickling, page 21.

The total federal subsidy to the rail mode in fiscal year 1990/91 amounted to some \$1.1 billion. All payments to the rail sector consisted of direct subsidies to carriers. Only two subsidy programs, namely payments under the *Western Grain Transportation Act (WGTA)* of \$645 million and payments to VIA Rail (\$442 million), accounted for over 94% of total subsidy payments to the rail mode. In this connection, it has been argued that the *WGTA* should not be categorized as a subsidy to the rail sector, since it is widely regarded as a direct subsidy to the agricultural sector in western Canada. The only other significant payments to the railways consisted of branch line subsidies (\$36 million) and payments under the *Maritime Freight Rates Act (MFR)* and the *Atlantic Region Freight Assistance Act (ARFA)*, which together totalled some \$33.5 million. The only source of revenue to the federal government with regard to the rail mode consisted of \$30 million, which it collected in the form of fuel excise taxes. Provincial governments do not subsidize rail transport; rather they tax it through diesel fuel taxes, even though they do not incur infrastructure costs for this mode.

The marine sector was subsidized to the extent of almost \$900 million by the federal government in 1990/91. The bulk of these subsidies results from expenditures by Transport Canada on services provided by the Coast Guard for which there are no user fees. The most important of these are marine navigation systems (\$307 million), marine search and rescue (\$148 million) and icebreaking and arctic operations (\$116 million).

The department also incurs expenditures in the provision of other services for which it does charge user fees. These include harbours and ports and many of its marine regulatory services such as ship safety inspections. In addition, the Department of Transport also provided direct subsidy of \$144 million to Marine Atlantic Inc. for ferry services between the mainland and Newfoundland and between the mainland and Prince Edward Island and a substantial transfer of funds to cover the deficits of the St. Lawrence Seaway Authority (\$55 million) and Canada Ports Corporation (\$20 million). Total revenues in the marine sector amounted to only \$41 million, a small amount compared with the substantial expenditures by the federal government in this mode.¹ Direct subsidies to ferry services by provincial governments amounted to \$96 million in 1990/91.

— Federal subsidies in the air transportation sector are relatively modest. Estimates prepared by Hickling indicate that the total subsidy amounted to only \$262 million in 1990/91. While Transport Canada incurred significant expenditures of almost \$572 million on airport and associated ground services and some \$823 on aviation services such as air navigation, air regulations, etc., these were offset by substantial revenues from user fees. Airport revenues and the Air Transportation Tax (ATT) are by far the largest sources of offsetting revenues from the air mode, with contributions of \$531 million and \$488 million respectively. The other major revenue generator in the air sector consisted of fuel excise taxes at \$83 million. While provincial governments' expenditures on airports totalled about \$98 million, this was more than offset by revenues of \$145 million in the form of excise taxes on aviation fuel.

With regard to roads, the small expenditures on infrastructure which have been incurred by the federal government in recent years have been greatly exceeded by the revenues it receives from the fuel excise tax on gasoline and diesel fuel used in road transportation. In 1990/91 federal expenditures on road infrastructure amounted to only \$131 million, compared with revenue from fuel excise taxes of \$2,283 million. The federal government also pays a direct subsidy of \$73 million to highway carriers under the *ARFAA* program.

As shown on Table 8.1, on an overall basis, the total subsidy by the federal government for all four transport modes amounted to only \$204 million in 1990/91. This is due to the large surplus in the roads sector, where the revenues to the federal treasury overwhelmingly exceed the small infrastructure expenditures and direct subsidy paid by the federal government.

As far as the other two levels of government are concerned, the provincial governments also have a significant surplus with regard to the transport sector as a whole, while the local governments bear a heavy burden due entirely to their expenditures on roads. It should be noted, however, that the subsidy burden on local governments is overstated in the Hickling analysis since its definition of revenues does not include transfers from one level of government to another. In fiscal year 1990/91, local governments received transfers from provinces amounting to over \$1 billion which were specifically earmarked for road construction and maintenance. The inclusion of this transfer into the picture would obviously reduce the surplus at the provincial level and reduce the subsidy burden at the local level of government. However, because local governments have no major sources of revenue in the form of user charges to offset their expenditures on road infrastructure, even with this adjustment they still bear the heaviest subsidy burden of the three levels of government.

The cost recovery levels achieved by all levels of government for infrastructure provided at public expense is shown on Table 8.2. Since all payments to the rail mode consist of direct subsidies, as opposed to the provision of infrastructure at public expense, there is no cost recovery in the form of user charges in rail. Hence the rail mode does not appear in Table 8.2.

The table indicates a very wide variation in cost recovery levels both between the different modes and the different levels of government. With regard to the federal government, cost recovery vastly exceeds expenditures on roads, but is only 6% for the marine mode.²

Views of Stakeholders

The issue of subsidies is characterized by highly polarized opinions. However, while there was much input in the consultation process either in support of or against subsidies for specific modes, there was very little discussion by stakeholders of the larger role of subsidies in the Canadian transportation system.

The intercity bus industry firmly believes that the government's subsidization of VIA gives railway passenger services an unfair advantage to the detriment of the intercity bus industry, which could provide a more efficient and cost effective service if it were not so unfairly positioned. This argument is supported by the findings of the Royal Commission on National Passenger Transportation, which indicate that not only is bus travel the least costly mode of passenger transport at 9.5 cents per passenger-kilometre in 1991, but it also receives the lowest subsidy, estimated at only 0.4 cents per passenger-kilometre. (p. 43) In contrast, rail is the most expensive at 43.9 cents and also the most heavily subsidized at 33.0 cents per passenger-kilometre. (p. 37)

Table 8.2
Extent of Cost Recovery: Infrastructure, 1990/91
(Revenues As a Percent of Estimated Expenditures)

	Cash Flow	Book Value
ROADS		
Federal	1,736	1,118
Provincial	133	98
Local	0	0
TOTAL	90	65
AIR		
Federal	81	77
Provincial	148	148
TOTAL	86	82
MARINE		
Federal	6	5

Source: Hickling, page 41.

The trucking industry suggests that the railways are subsidized to their disadvantage. The rail carriers and related stakeholders, such as the Canadian Association of Railway Suppliers, argue that motor carriers are subsidized because they do not pay their fair share for the use of the highways.

With regard to the WGTA, the St. Lawrence Seaway Authority's brief states:

At present the Great Lakes/St. Lawrence Seaway system is competing on an uneven basis with rail. Grain moved by rail is in receipt of subsidies which mask some of the shortcomings of rail transportation relative to water transportation. Because of the distorting effect of subsidies received under the Western Grain Transportation Act, shippers are not paying the full

costs of the resources used in moving grain. This has the effect of hiding some costs (close to 70%) from the decision makers leading to overuse of the subsidized service at the expense of the more efficient unsubsidized water mode. (p. 3)

This view is also supported by the Thunder Bay Harbour Commission, which recommends, in its submission,

removal of modal bias in the WGTA Subsidy by delivering the WGTA benefit directly to farmers or by extending the subsidy formula to include all modes of transportation. (p. 23)

Subsidies and NTA, 1987 Objectives

The economic effects of subsidies arise from the obvious fact that subsidies induce a change in behaviour. This change in behaviour has an impact on the allocation of resources and can undermine economic efficiency. As noted in the Hickling study, because the extent of subsidy differs from mode to mode, existing policies induce excessive use of heavily subsidized modes. Furthermore, transportation subsidies can undermine private sector productivity incentives by effectively subsidizing certain types of economic activity and hence deterring the reallocation of resources to more productive uses.

Consequently, with regard to both direct and indirect subsidies provided by the federal government to the various modes, it is highly desirable to review all transport subsidy programs in order to develop a clear understanding of the objectives that particular subsidies are designed to achieve. Such an exercise requires answers to a number of questions such as: How effectively is the subsidy meeting its stated objective? What are the direct and indirect effects of a subsidy (cost, benefits, effects on other modes)? Are there better (i.e., more cost-effective) ways of meeting the stated objective of a particular subsidy program?

For example, it is evident that the objective for the establishment of the *MFRA* and subsequently the *AREFAA* is not as valid today as it was at the time when the *MFRA* was introduced in 1927. In this connection, the Atlantic Canada Opportunities Agency in its submission to the Review Commission states: "There is some evidence that there are areas where subsidies could be spent smarter." (p. 24) and therefore recommends:

That a thorough review of MFRA and AREFAA be undertaken to determine the extent to which dollars spent under both subsidy programs could be spent smarter, more innovatively, and better serve regional development and transportation objectives. (p. 25)

Furthermore, if the primary goal of a subsidy program is not directly transport related (e.g., the *WGTA*), a good argument can be made on efficiency grounds that the subsidy should not be delivered to the final beneficiaries through the transport sector.

The need for an efficient and effective transportation system becomes a matter of paramount importance with increasing globalization, especially for a trading nation such as Canada since the higher costs which result from inefficiency cannot easily be passed on. From a theoretical perspective, in order to achieve an efficient transportation system all incremental costs (i.e., the long run marginal social costs) that can be attributed to the users of the system should be covered through user fees. Such an approach would have to cover all costs associated with the transportation system including such "non-market" costs as air pollution, noise, accidents, etc.

Due to data limitations, the Hickling study did not incorporate social costs into its analysis and hence cautions that "from the perspective of economic efficiency, the subsidy estimates...need to be viewed as a partial analysis." (p. 48) The report goes on to note that in the absence of marginal social cost estimates on a system-wide basis "full information on the achievement of the *NTA, 1987* economic efficiency objective cannot be obtained." (p. 48)

At the very least, in the face of increasingly scarce government financial resources, expenditures in the form of transport subsidies should be reviewed in terms of their cost effectiveness to ensure that there are no better ways to achieve the same impact at a lower cost.

Summary

The content of this section can be summarized as follows:

1. The extent of subsidization in the transport sector, as well as the levels of cost recovery, vary widely from mode to mode.
2. On an overall basis, the total subsidy by the federal government for all four transport modes amounted to \$204 million in 1990/91. This low figure is due to the large surplus in the roads sector, where the excise revenues of the federal government exceed expenditures by a wide margin.
3. With regard to both direct and indirect subsidies, it is highly desirable to develop a clear statement of the objectives that particular subsidies are designed to achieve and to review this on an ongoing basis.

2. TRANSPORT AND REGIONAL DEVELOPMENT

Legislation

Section 3.(1)(d) of the *NTA, 1987* states that "transportation is recognized as a key to regional economic development" and section 3.(1)(g)(iv) states that there should not be "an unreasonable discouragement to the development of primary or secondary industries or to export trade in or from any region of Canada." Regional development is not explicitly defined in the legislation. There are two different senses in which this policy requirement must be addressed, the first straightforward and the second more fundamental.

In the straightforward sense, transport is required for regional development to ensure that isolated areas of the country have links to move people and goods to major centres elsewhere in Canada and hence also beyond the national boundaries. All provinces are concerned that isolated areas be sustained in terms of economic viability by the existence of transport infrastructure and the provision of services at rates that are not unduly high.

In fact, there are no inhabited areas of Canada without any transport infrastructure, and in most places the infrastructure would be considered adequate for the amount of traffic generated. The danger of excessively high rates in isolated areas, where traffic is too sparse to generate effective competition, and the danger of inadequate service have been well recognized in the *NTA, 1987*. The measures include competitive access provisions for railway transport, branchline abandonment provisions, the continued regulation of northern air and marine services and, outside the specific provisions of the 1987 legislation, heavy subsidy of VIA rail services to certain remote communities.

The second meaning attached to the role of transport in regional development is the idea, well-rooted in Canadian economic history, that transport is essential to regional development to ensure that, in the words of section 3.(1)(d), "the potential economic strengths of each region may be realized."

Transport and Regional Development Circa 1975

Concerns with respect to transport and regional development in the Atlantic Region and the Prairie provinces go back well over one hundred years, even before Confederation itself. The problem was partly one of geography, where transport costs were inevitably high to cover the vast distances between the Atlantic Region and Central Canada and between Western Canada and Central Canada. However, with the exception of the circuitous all-Canadian route from the Atlantic Region to Central Canada, transport complaints were not advanced in terms of distance, as it is hard to complain against geography. Rather, the basic complaint was that the Prairie and Atlantic Regions were forced to meet an unduly high proportion of railway fixed costs, as compared with Central Canada, where alternative forms of transportation were more readily available.

This complaint was still very much alive to about the mid-1970s, in spite of the increased impact of trucking in the two previous decades as a competitor to rail. In July 1973, the Western Economic Opportunities Conference (WEOC) took place in Calgary between the Prime Minister and the Premiers of the four western provinces. Transportation had pride of place on the agenda and the Premiers stated in their submission that "the development of the Western region of Canada is inhibited by the lack of positive policy direction and the discrimination inherent in our present system of freight rates."

In the Atlantic Region and Eastern Quebec, rail freight rates have been subsidized since 1927 on movements within this area and on that component of westbound rail movements which took place within the area. In 1969, the subsidies were extended to other modes of transport, especially trucking, and additional subsidy was allowed on some specified westbound products. Nevertheless, general complaints about transport and regional development still continued. In "An Atlantic Provinces Transportation Policy" dated April 1975, the Atlantic Premiers stated that the reliance on competition in the *National Transportation Act, 1967*, was "not practical in the Atlantic Provinces where there is limited competition, lack of facilities, a low volume of traffic, and long distances which are sparsely populated."

Transport was still regarded as very important to economic development in the mid-1970s. In the west, the complaints related to rail freight rate discrimination and there was some cause for legitimate complaint. Statutory freight rates on grain reduced the transport costs borne by western grain producers, but they also discriminated against further processing in the west; freight rates were relatively much higher on manufactured products delivered to the prairies than on transcontinental rail movements; but allegations of overall discrimination across the entire rail rate scale structure could not be substantiated. In the Atlantic Region, there was dissatisfaction with the role of transport in regional development, but it was very difficult to find freight rate complaints on specific products, in view of the heavy subsidy program. The basic problem in both the Prairie and the Atlantic Regions may have been not so much discrimination as high transport costs caused by geographical distance to major markets in Central Canada.

Transport and Regional Development Today

Complaints on transport and regional development may still be heard today, although with diminishing volume, since the issue of transport and regional development is less in the mainstream of public policy issues.

A study of transport and regional development in the Prairie provinces was recently carried out by the University of Manitoba Transport Institute,⁴ which concluded that this was no longer a key policy issue. At the federal level in the west, there had been very little action by Western Economic Diversification Canada (WD) in the area of transport services and regional development. The regional offices of Policy and

Coordination, Transport Canada, state that very little is heard nowadays about transport in relation to regional development in contrast to the situation in the mid-1970s.

The Province of Alberta is faced with very few complaints about freight rates, while these were rampant in the mid-1970s. It is interesting to contrast Alberta views of the 1970s with those expressed in the Alberta submission to the NTARC:

Regional economies may have closer economic ties with foreign countries than with some parts of the nation itself, and new businesses are increasingly discovering that they can operate equally well from any community that is part of a responsive transport system. (p. 8)

Dependence of the Province of Saskatchewan on resource products means that there will always be a concern with transport charges, but the freight rate issue has become much less prominent. The transport and regional development issue has become more subdued in Manitoba and the current Manitoba development agreement with WD does not include any transport component. However, traditional views can still continue as noted from the Manitoba government submission to the NTARC:

Manitoba believed [in 1987] and affirms its belief that transportation is an important tool of public policy to promote economic development. (p. 45)

Interviews carried out by the University of Manitoba Transport Institute with carriers in the rail and highway modes confirmed a modified approach to this issue. Shippers of resource products interviewed in the three provinces needed to have continued access to means of transportation on a competitive basis with adequate service levels. The general view was that matters had improved considerably in recent years. The shippers assessed their needs strictly in a business context and not with any reference to wider aims relating to transport and regional development. The overall conclusion of the Transport Institute was that "a feeling of ennui has settled on the general subject of transport and regional development" in the Prairie provinces.

Turning to the Atlantic Region, a recent study by the University of New Brunswick Transportation Group has argued that, in today's globalized trading environment, it is precarious to rely on competitive advantages based solely on low transportation costs.⁴ In the Atlantic Region, there has been increased competition among carriers, rationalization of the rail network and greater restraint in governments' expenditures on transportation. Regional development should stress increased export-orientation, self-sufficiency, and innovation and upgrading within the region. Subsidies presently provided under the *MFRA* and the *AREAA* are not regarded as an important form of financial assistance by firms in the Atlantic Region, and they may actually impede long-term competitiveness in that the funds would be better diverted to improve highways. As

in the Prairie provinces, this report suggests that preoccupation with the effect of transport rates on regional development has become much less marked.

However, the Province of New Brunswick in its submission to the NTARC made mention several times to the *NTA, 1987*, section 3.(1)(d) reference to economic development indicating support for retaining this feature of the legislation. The Nova Scotia government made a more pragmatic comment in their submission:

While an adequate transportation base in and of itself will not ensure economic prosperity, it is very clear that the absence of this base will surely act to retard our economic development opportunities. (p. 1)

Most of the commentary from Atlantic Canada linking transportation and regional development referred to the specific need to retain a national rail network. Typical was the submission of the Atlantic Provinces Transportation Commission:

[I]t is imperative that specific rail lines be identified as part of an essential rail network and procedures promptly established to prevent the abandonment of those lines. Unless such a procedure is established, the Atlantic Region faces the risk of abandonment of essential lines with concomitant risks to the rest of the system and regional economic development. (p. 8)

In Ontario and Quebec, the public policy need is to assure access to passenger and freight transport services for the more isolated areas of each province. Economic corridor studies carried out by the Ministry of Transportation, Ontario, indicate that economic development in Northern Ontario is not hindered by any lack of transport infrastructure or services.⁵ In Quebec, there is concern for access to resource areas at great distance from markets and the need to preserve adequate rail infrastructure.

The extent to which transport and regional development has ceased to be a high profile issue is somewhat surprising. The reasons appear to be as follows.

1. *Regional development is now much less important in federal government policies than in the mid-1970s and consequently there is less stress on the use of transport as a tool for regional development.* Reduced interest in regional development is due to a number of factors. First, provincial variations in personal disposable income per head are considerably less marked than 20 years ago, although this is due more to inter-regional transfer payments than to any stimulus to growth in the less advantaged regions. Second, real income per head has been rising less in the last two decades. In 1951-71 average labour income per head increased in real terms by 3.6% per annum in Canada, compared with 1.3% per annum in the

1970s and 0.5% per annum in the 1980s. Reduced rates of increase in real income limit the scope for increased tax revenues. The federal government has also been faced with a national debt that has been rising substantially. In short, the money has not been there for extensive regional development initiatives. Third, the stress on competition and market forces as the engine for economic growth, together with very real competitive pressures on an international basis, has not been conducive to initiatives for regional development, which is often regarded as a diversion of resources from uses dictated by markets to less productive purposes.

2. *Markets have changed in the last 20 years, with the east-west movement across Canada becoming less important.* In the 1970s, freight rate complaints related chiefly to movements from the Prairie and Atlantic Regions to Central Canada. In Alberta, there has been a considerable expansion in north-south traffic, primarily by truck, and a large increase in offshore shipping from western ports. This has reduced the importance of freight rates between Alberta and eastern Canada. In Saskatchewan, the resource industries have worked hard at achieving efficiencies in transportation with unit trains, leased cars and the establishment of storage facilities in the U.S. Better rates have been negotiated on north-south movements, and Saskatchewan is also relying increasingly on exports through western Canadian ports. In Manitoba, there has been an increased orientation in transport toward north-south movements and westward rather than eastern movements, although the geographical location of the province means that the alignment to the west has been less than in Saskatchewan and Alberta. In the Atlantic Region, roughly two-thirds of exports from the region are now destined for the United States, thus reducing the importance of the east-west movement.
3. *The bargaining strength of shippers has increased as a result of the NTA, 1987.* Greater provision has been made for competitive access to rail services. Motor vehicle competition was made more effective through increased limits on weights and dimensions. The University of Manitoba Transport Institute study reported that shippers in all three Prairie provinces considered that their bargaining power had improved. In the Atlantic Region, competition among carriers has increased and the operating environment for firms has changed significantly. The University of New Brunswick Transportation Group stated:

Firms have had to keep pace with new threats and opportunities posed by increasingly globalized trade, revolutionary technological innovations, logistical practices emphasizing timeliness and inventory reduction, and so on. (p. vi)

Summary

The content of this section can be summarized as follows:

1. Canadian governments at the federal and provincial level continue to be concerned that transport infrastructure and transport rates will be adequate to sustain the isolated areas of the country in terms of passenger and freight transportation. However, there is little interest in using transport as "a tool for regional development."
2. The inclusion of section 3(1)(d) in the *NTA, 1987* does not appear to have influenced policy in the last five years and there do not appear to be any strong demands for pro-active implementation of this section, especially if this would be at the cost of efficiency in the transport industries.
3. Although regional disparity will continue to be a legitimate concern of governments, there seems to be increasing acceptance of the view that, provided transportation infrastructure and services are in place, transportation policy is an inappropriate mechanism to promote regional development. It will be more effective to address regional development needs directly through focussed programs which can build on the unique strengths of specific regions and communities.

3. EMPLOYMENT AND MANAGEMENT-LABOUR RELATIONS

Although this issue is not referenced in section 3, the NTARC is explicitly directed to consider the effect of the 1987 legislation on employment and management-labour relations in section 266(3)(i). The discussion in this section draws substantially on a consultant report prepared for the Review Commission by Dr. E.G. Fisher entitled *Canadian Transportation Employment and Management-Labour Relations in Transition: 1985-92*.

All data presented in this section are from the 1991 Annual Review of the Agency. At the time the consultant prepared his study, this represented the latest available data. The statistical series covering industrial employment underwent a major revision as of April 1992. As a result, the figures in this section are not comparable with those shown in Chapter 2.

Competitive Pressures on the Transport Sector

Employment and management-labour relations in the transportation sector in Canada have been in transition since the early 1980s. In addition to the *NTA, 1987*, which came into force on January 1, 1988, the transportation industry has also been faced by numerous other external changes over the past decade. These include recessions in the early 1980s and again in 1990-1992, the globalization of trade and shifting trade patterns, the Canada-U.S. Trade Agreement, technological change and increasing

emphasis on competition and market forces throughout the economy. Given such a dynamic environment, transport firms are continually seeking ways of strategically positioning themselves in emerging or expanding domestic, continental and international markets.

The fact that all these forces have a common element, increasing the competitive pressure on the transport sector, makes it impossible to isolate the influence of any one single factor. Canada's airlines and railways, for example, began to restructure their operations as early as the mid-1980s in response to the 1980-82 recession and the deregulation of the transport sector in the U.S.

Management response in all modes to the intense competitive pressures, which resulted in a decline in prices and profits, was to realign their operations to suit the new environment that confronted them. In the area of employment and management-labour relations, this has focussed on an attempt to improve efficiency by renegotiating compensation packages and eliminating restrictive work practices. Such productivity bargaining has involved the implementation of technological change to enhance productivity (i.e., the substitution of capital for labour), as well as the elimination of restrictive work rules such as crew sizes, narrow work jurisdictions and scheduling constraints.

In return for such concessions, unions have been offered benefit improvements in the form of employment security, early retirement or other "buy-outs" of employment contracts. For example, in 1985 both CN and CP negotiated a job security package with the shopcraft and non-operating unions. This buy-out package entitled all employees who had completed eight years of cumulative service to draw salary and benefits until retirement as long as they were available for work.

Employment Trends

While employment trends in transportation since the mid-1980s differ by sector, certain common elements emerge in air, rail and trucking. The most significant of these is the fact that it is not possible to identify any definitive change in the general trend with regard to employment which could be attributed to deregulation of transport. The second common element in the period under consideration is the major decline in transportation employment which occurred in 1991 as a result of the recession. Total employment in transportation dropped in that year by some 31,200 jobs, i.e., by 7%. (Fisher, p. 19)

With respect to the rail mode, employment has been declining for over 30 years, with the decline accelerating at the beginning of the 1980s and no evident change in the overall trend after the introduction of deregulation in 1988. The steady decrease in rail employment over the years has been a direct consequence of technological change, rationalization of plant, the loss of market share and the gradual loosening of antiquated work rules. Buy-outs of employment contracts have been means of securing the

reduction in employment. As has been discussed in Chapter 5, the decline in rail employment will certainly continue.

As far as the trucking industry is concerned, employment trends reflect the highly competitive nature of the industry and follow closely the general trend of the economy. Thus, trucking experienced employment growth of 2.5% and almost 2% in 1988 and 1989 respectively followed by a decline of some 20% between 1989 and 1991. Because of its close ties to the manufacturing sector and the increasing dependence on such logistics practices as just-in-time delivery, the trucking industry was hit particularly hard by the last recession.

In the air transport sector, the period from 1985 to 1990 was marked by slow but steady increase in employment, in spite of technological change and industry rationalization. However, this sector also was not immune to the recession and suffered from a substantial decline in employment in 1991. This downward trend in employment is likely to continue with the ongoing rationalization of the industry to correct the existing overcapacity situation.

While there is no question that employment in the transportation sector has declined substantially in recent years, it is by means clear to what extent this is due to deregulation as opposed to other external forces. In their submissions to the Review Commission, some stakeholders, including several unions (Canadian Brotherhood of Railway, Transport and General Workers, Canadian Union of Public Employees (CUPE) and the Canadian Labour Congress), as well as the Province of Manitoba commented on the negative impact of deregulation in terms of job losses in the transport sector, particularly in the rail and airline industries. On the other hand, the Province of British Columbia states in its submission:

The NTA, 1987 does not appear, based on historical trends in the Canadian railway and airline industry, to be a causative factor in the employment declines in these sectors. The declines are more likely the result of technological developments permitting the substitution of capital and technology for labour, increased competitive pressures resulting from modal and intermodal competition, and globalization in the airline industry. (p. 16)

Management-Labour Relations

Employee compensation packages and work stoppages are two factors which provide a good indication the status of management-labour relations in an industry. Employee compensation packages are a good indicator of the relative power of management and labour since they tend to be a key issue in almost every contract negotiation. With the exception of trucking, transportation employees have been, and continue to be, well paid. Since the enactment of deregulation in the transport industry, increases in average weekly earnings in the water and rail transport sectors have slightly exceeded the average

increase in all sectors of the economy, while earnings in the air sector have equalled the overall increase in national average earnings. Furthermore, between 1988 and 1991, the increases in average weekly earnings in these three sectors were marginally higher than the rate of inflation. Only in the trucking sector have employees been faced with a decrease in real terms in their average weekly earnings.

In terms of work stoppages, the period from 1985 to 1991 has been one of relative peace in the transportation industry. There were a total of 112 transportation strikes or lockouts during this period compared with 182 in the preceding seven years between 1978 and 1984. During both of these seven year periods, strikes were most common in the trucking industry and least common in the rail industry. In the three years immediately preceding the enactment of the *NTA*, 1987, there were 47 strikes in the transport sector compared with 54 in the three years immediately following it.

Only a few submissions to the Review Commission dealt with the issue of management-labour relations in transportation. CUPE (Airline Division) maintains that the conclusion drawn by the Agency that "since the coming into force of the new transportation legislation, management-labour relations have been, in general, unhostile in the transportation sectors" is "over-optimistic" at least as far as air transport is concerned. In its view, the first four years of de facto airline deregulation saw a large number of major labour disputes, including strikes at five of Canada's six scheduled Level 1 carriers in 1985-86. CUPE also notes the 1992 dispute between Nationair and its flight attendants as an example of "hard-nosed corporate attitude under airline deregulation..." (p. 16)

However, it should be noted that there has been considerable co-operation between management and labour at Canadian Airlines International, with all the unions agreeing to put money into the airline in order to help it overcome its financial difficulties.

With respect to the rail mode, the Thunder Bay Harbour Commission states in its submission:

It appears that the evolution of the transportation system since NTA, 1987 has instilled, at least in railroad labour management relations, a previously unseen level of understanding and co-operation. (p. 19)

In a similar vein, the Alberta government notes:

More recently, management and labour have come to better understand the need for improved productivity to preserve the financial viability of the Canadian rail system, and the result has been agreements which have permitted significant productivity improvements. (p.38)

Summary

The content of this section can be summarized as follows:

1. The increased competitive pressure faced by the transportation industry has resulted in significant job losses in the last two years in all modes. However, deregulation is only one of several factors responsible for this increased competition.
2. It is not possible to identify a definitive impact of deregulation on the industry by examining the trends in employment and earnings.
3. Management-labour relations have actually improved in certain instances in the transport sector since both management and unions have come to realize that they often have similar goals.

NOTES

- 1 The figure of \$41 million revenues excludes the revenues of the Seaway Authority and Canada Ports Corporation. This is because only the deficits (i.e., expenses less revenues) of these two organizations have been counted in the estimate of federal transportation subsidies to the marine mode.
- 2 As explained in the previous footnote, no revenues have been included for the Seaway Authority and Canada Ports Corporation in this calculation. The inclusion of these revenues would increase the percentage rate of cost recovery, but would have no effect on the federal transportation subsidy for the mode, as there would be a corresponding increase in expenses in the equation.
- 3 John Heads, *Transport and Regional Development: The Prairie Provinces*, Economic Analysis Directorate, Transport Canada, Ottawa, May 1992. TP 11315-E.
- 4 B.G. Bisson, J. Brander, M.C. Irch, J. Palin, *Regional Economic Development and Transportation*, Economic Analysis Directorate, Transport Canada, May 1992. TP 11318-E.
- 5 Ministry of Transportation, Ontario, *Economic Corridor Series — Highway 11 and 69*, Provincial Transportation Division, March 1989.

9

Transport Policy Research (II)

This chapter addresses research on three policy issues which are not mode specific. These are transport safety, transport and the environment, and transportation accessibility for the disabled. Two of these subjects relate directly to section 3 of the *NTA, 1987*; transport and the environment is not mentioned specifically in the Act, but the Commission felt that it was necessary to conduct research in this area.

1. TRANSPORT SAFETY

Because of time limitations, the NTARC did not undertake original research on transport safety. Rather, submissions were requested of the government agencies primarily concerned in transport safety, namely Transport Canada and the Transportation Safety Board. Data were also provided by the National Transportation Agency, although this organization now has very limited safety responsibilities. This section is an analysis of data by the NTARC staff and is not a comprehensive examination of safety issues.

Transport Safety and Economic Deregulation

The 1987 economic deregulation of transport in Canada clearly excluded any safety deregulation. The Honourable Don Mazankowski, then Minister of Transport, stated in 1985 that he "would like to indicate unequivocally that the Government will neither propose nor permit any regulatory reform that might be detrimental to safety standards." (*Freedom to Move*, Preface, p. 2) This has been the consistent attitude of the government towards safety in transportation. Section 3.(1)(a) of the *NTA, 1987* now requires that "the national transportation system meets the highest practicable safety standards."

Economic deregulation was not accompanied by any deregulation of safety. In 1988, the *Railway Safety Act* was passed; and the regulation of railway safety was transferred from the Agency to Transport Canada on January 1, 1989. The *Canadian Transport Accident Investigation and Safety Board Act* was passed in 1989 and on March 29, 1990 the Transportation Safety Board took responsibility for accident investigation in all transport modes under federal jurisdiction. In March 1987, preceding the enactment of the *Motor Vehicle Transport Act (MVTa), 1987*, the federal and provincial governments signed a Memorandum of Understanding committing them to the development and implementation of the National Safety Code for commercial vehicles. In short, operational and safety regulations for the various transport modes were

strengthened rather than relaxed as a result of measures taken at the time of and shortly after the 1987 economic deregulation of transport.

Transport carriers have claimed that they have an interest in promoting high safety standards, because accidents and disruptions of service have an adverse effect on profitability. However, concern was expressed during the 1987 deregulation debate that carriers struggling in extremely competitive markets could be short of revenue and that this could result in deterioration of equipment and infrastructure and the curtailment of internal safety programs. It was also feared that new carriers entering the transport industries might not be as safety conscious as existing carriers.

In 1989-91, fatalities in the highway mode averaged 3,965 per annum, accounting for 91.5% of total transport deaths. The overwhelming majority of these accidents were attributable to private automobiles and not to freight transportation. The other modes have fewer fatalities: air — 200 fatalities per annum in 1989-91, rail — 121 fatalities, and water — 46 fatalities.¹

Four measures are customarily used in the analysis of transport accidents — the number of accidents, the number of fatalities, the number of serious injuries, and property damage. However, there are problems of definition both between modes and within each mode over time with respect to these measures. The problem is minimal in measuring fatalities, although even here there have been variations between jurisdictions on the specification of the time period after an accident in which a death occurs.

The number of fatalities in the highway mode is large; nevertheless, when attention is directed only to accidents caused by commercial vehicles, there could be random variations from year to year, and it is safer to look at two-year or three-year averages. This is even more important in the other transport modes, where fluctuations from year to year can be relatively more substantial. Much of the discussion below is therefore based on comparisons of annual averages for 1985-87, before deregulation, and 1989-91, after deregulation. (The year 1988 is omitted on the grounds that the effects of the 1987 deregulation would not have been apparent then.) In the case of air, it is also necessary to consider an earlier time period because of the *de facto* deregulation in 1984.

Highway Accidents

Highway fatalities in Canada are shown in Table 9.1; these figures include all fatalities attributable to private automobiles and commercial vehicles. Fatality rates are also shown — these are the number of fatalities per million of the Canadian population, the number of fatalities per million motor vehicles registered in Canada, and the number of fatalities per million licensed drivers.

The number of fatalities caused by highway accidents in Canada has been declining for many years. To explain this improvement, Transport Canada has noted increased use of seatbelts (driver seatbelt usage was estimated at 81% in 1989-91 compared with 65% in 1985-87) and a reduced incidence of drivers impaired by alcohol

(36% of driver fatalities involved alcohol-impaired drivers, according to the latest figures for 1989, compared with 43% in 1985-87). The large reduction in fatalities in 1990 and 1991 was partly due to the economic recession and the reduced amount of driving that this caused. The population of Canada, the number of motor vehicles and the number of licenced drivers have all been increasing; and the rates of highway fatalities have therefore been declining.

Table 9.1
Highway Fatalities

Year	Number of Fatalities	Rate per million of		
		Population	Motor Vehicles	Licensed Drivers
1985	4,436	173	295	273
1986	4,068	160	266	251
1987	4,28	167	271	254
1988	4,153	160	255	242
1989	4,250	162	252	243
1990	3,961	150	233	224
1991	3,684	136	n/a	n/a
Average:				
1985-87	4,239	167	277	259
	3,965	149	242	233

Source: Surface Group, Transport Canada. 1989-91 rates for motor vehicles and licensed drivers are in fact 1989-90 and therefore overstated, as fatalities declined in 1991.

Turning to the contribution of commercial vehicles to highway fatalities, data on the numbers of vehicles involved in collisions are available in three categories, namely, collisions involving fatalities, personal injury, and property damage. The figures do not show which vehicles were responsible for the accidents, but only which vehicles were involved. Data on vehicles involved in fatal accidents are shown in Table 9.2.

The proportion of private vehicles involved in fatal accidents declined between 1986-87 and 1989-90, for the reasons given earlier in this section, while the proportions increased for tractor-trailers and large trucks. Accidents involving commercial vehicles tend to be more severe in terms of fatalities than those involving only private automobiles. Tractor-trailers were involved in 7.1% of all fatal highway accidents in

1989-90, but they were involved in little more than 1% of personal injury and property damage accidents. Similarly, trucks of over five tonnes were relatively more involved in fatal accidents than in other accidents. However, the number of deaths involved is no greater in fatal accidents involving tractor-trailers or large trucks than it is when the accident involves only passenger cars.²

Table 9.2
Vehicles Involved in Fatal Accidents

Vehicle	1986-87	1989-90
	%	%
Tractor-trailers	6.9	7.1
Trucks > 5 tonnes	3.5	4.4
Buses	0.6	0.9
Private Vehicles	89.0	87.6

Source: Surface Group, Transport Canada. These data were not collected prior to 1986 and are not yet available for 1991.

It is reasonable, therefore, to argue that if tractor-trailers were involved in 7.1% of fatal accidents in 1989-90, then 7.1% of highway fatalities in those years could be associated with tractor-trailers. This approach is cumbersome, but currently there is nothing better available. The results from applying the percentage distribution of vehicles involved in fatal accidents given in Table 9.2 to the numbers of highway fatalities given in Table 9.1 are presented in Table 9.3.

Table 9.3
Highway Fatalities Associated with Commercial Vehicles

Commercial Vehicle	Number: Annual Average	
	1986-87	1989-90
Tractor-trailers	288	291
Trucks > 5 tonnes	146	181

The number of fatalities associated with tractor-trailers was virtually the same in 1989-90 as in 1986-87. The effects of reduced alcohol impairment and increased seatbelt usage would have had a greater effect on drivers of private automobile than on

commercial transport drivers. Moreover, according to tentative estimates made by Transport Canada for 1988, the fatal accident rate per 10,000 registered vehicles was 4.0 for passenger automobiles compared with only 1.5 for commercial vehicles. On the other hand, the new National Safety Code might have been expected to have had some effect on fatal accidents involving tractor-trailers. However, this code was not fully implemented by 1990 and perhaps it was too early to expect an improvement then.

Turning to straight trucks of over five tonnes, the number of fatalities has increased and there does not appear to be any good explanation for this development. The *MVTA* deregulated extraprovincial trucking, but the activities of these straight trucks, as distinct from tractor-trailers, are predominantly within provincial boundaries. In addition, roughly half these straight trucks are used in private carriage, as distinct from the for-hire industry, and the financial viability of private carriage would be affected primarily by the recession rather than the *MVTA*.

Air Accidents

Air transport in southern Canada was effectively deregulated in 1984 and the examination of this mode therefore requires focus on three time periods. There are two adverse effects that economic deregulation could have on air safety. First, keen competition between carriers could cause safety to be compromised for commercial considerations. Second, the entry of new carriers or of existing carriers into new markets could increase the incidence of inexperienced management and hence the time required to develop the "safety culture" of the organization.

The examination of air safety in this section is limited to the statistical evidence as to whether the economic deregulation of the 1980s appears to have had an adverse effect on safety. Key data on air accidents and fatalities are given in Table 9.4.

The Level I carriers are Air Canada and Canadian Airlines International. There is no evidence of any reduced attention to safety in the accident statistics. Level II airlines carry at least 50,000 passengers and/or 10,000 tonnes of revenue freight per annum (but fall short of Level I traffic requirements). Prior to 1989-91, the accident record was also excellent here. The large increase in fatalities in 1989-91 was due to two major accidents — the 1991 Nationair charter accident in Saudi Arabia involving the loss of 261 lives and the Air Ontario accident in 1989 at Dryden, Ontario, that caused the loss of 23 lives. Justice Moshansky's report on the Dryden accident has drawn attention to issues such as lack of required safety and operational discipline, serious imperfections in the supervision of operating regulations, and an essential inadequate "safety culture." The accident rate for Levels III and VI commercial air carriers has also increased sharply.

There does not seem to be any need for special comment on accidents among aircraft owned by the various levels of government in Canada. The accidents among private aircraft have fallen and fatalities are less than in the 1982-84 period. Accident

Table 9.4
Air Accidents and Fatalities

	Average 1982-84		Average 1985-87		Average 1989-91	
	Accidents	Fatalities	Accidents	Fatalities	Accidents	Fatalities
Commercial						
Level I	3	8	2	0	0	0
Level II	3	1	2	0	10	97
Levels III-VI	195	59	197	45	231	54
Governments	6	1	4	2	8	1
Private	295	62	255	47	230	48
Total	502	131	460	94	479	200
Foreign aircraft in Canada	27	10	32	96	27	6
Rates per 100,000 flying hours for Canadian Registered Aircraft	14.4	3.8	14.2	2.9	13.8	5.8

Source: Transportation Safety Board of Canada. Rates per 100,000 flying hours exclude foreign aircraft. The number of fatal accidents (as distinct from number of fatalities) per 100,000 flying hours was 1.7 in 1982-84, 1.6 in 1985-87 and 1.6 in 1989-91.

statistics for foreign aircraft in Canada would seem to have little relevance to economic deregulation. The high number of fatalities in the 1985-87 period was because of the Arrow Air accident in Gander, Newfoundland.

Railway Accidents

Relevant statistics for accidents and fatalities are contained in Table 9.5. Train miles covered by Canadian railways were 2.6% less in 1989-91 than in 1985-87 and this reduced work should therefore lead to a slight reduction in accidents.

Collisions and derailments on the main track of railways generally cause the most property damage and pose the greatest potential hazard to the public, particularly

Table 9.5
Railway Accidents and Fatalities

	Average 1985-87		Average 1989-91	
	Accidents	Fatalities	Accidents	Fatalities
Main track				
Collisions	13	8	9	0
Derailments	151	0	105	0
Yards, spurs, sidings				
Collisions and derailments	185	0	257	1
Crossing accidents	530	52	419	65
Trespassers	94	47	90	51
Other	55	6	31	4
Total accidents	1,028	113	911	121
Accidents with dangerous goods involvement	218	0	296	0
Other dangerous goods incidents	446	0	496	0

Source: Transportation Safety Board of Canada.

when dangerous goods or passenger trains are involved. Collisions and derailments on the main track were substantially less in 1989-91 than in 1985-87 and no fatalities were recorded in this later period. The fatalities in 1985-87 were caused by the 1986 passenger train accident at Hinton, Alberta, in which 23 people lost their lives.

Railway collisions and derailments in yards, spurs and sidings normally occur at low speeds during the course of switching operations; and are less serious than main track accidents. Table 9.5 shows an increase in the number of these collisions and derailments, but this is partly due to more complete reporting of such accidents rather than to an actual deterioration in safety. In addition, commodities such as diesel oil and molten sulphur have only recently been classified as dangerous goods. Release of a dangerous good occurred in only 2.5% of accidents involving dangerous goods.

Crossing accidents occurring at the interface of the railway and the highway account for half the deaths associated with railway transport. The number of crossing accidents and fatalities declined very substantially during the early 1980s, due partly to increased provision of warning devices at crossings and partly to the factors that were causing a reduction in other highway accidents. The decline in the number of crossing accidents has continued. However, the decline in the number of fatalities has not

continued and the average was higher in 1989-91 than in 1985-87. There has been speculation that crossing accidents are becoming more severe as a result of heavier trains moving at greater speeds and smaller automobiles that are less able to be deflected from the path of oncoming trains.

After crossing accidents, the major source of fatalities associated with railway operations is trespassing. The incidence of trespassing fatalities has increased slightly. Of the trespassing deaths recorded in 1989-91, some 19% were definitely established to be suicides; the total attributable to this cause may be considerably higher.

Other accidents cover the operation of track motor cars and maintenance of way equipment and employees struck by rolling stock. These accidents show a decline.

Other dangerous goods incidents involve leakages where no accident has occurred. Although the volume of product released may not be large, these incidents are indicative of potentially unsafe operating procedures or defects in car components. The leakages have been increasing, and while this is partly due to more complete statistical reporting, reduced railway employment could be resulting in less vigorous monitoring.

Water Accidents

Water transport accident statistics cover vessels under federal jurisdiction operating under the Canadian flag and foreign vessels operating in Canadian waters. (See Table 9.6) Pleasure craft are excluded from the statistics and fishing vessels have been excluded as not relevant to the present analysis. The examination of the periods 1985-87 and 1989-91 covers an increase in shipping activity at Canadian ports of 11% in tonnage handled and 8% in vessel movements. There was negligible deregulation of marine transport in 1987 and the discussion of this mode is only for purposes of completeness.

Shipping accidents include collisions, groundings, strikings, sinkings, fires, explosions and other accidents resulting in damage to the vessel. The number of commercial shipping accidents increased considerably between the two periods reported, although part of this increase is due to more complete reporting of minor accidents in recent years. Fatalities in commercial shipping were considerable in the period 1989-91. However, the high average for this period mainly reflects the effect of a severe storm in December 1989, which resulted in the loss of 44 lives and two vessels. Obviously, this has no connection with the issue of the economic deregulation of transport.

Accidents reported in passenger/ferry operations have increased significantly, but there have been no fatalities and no vessels lost in the 1989-91 period. Use of this mode has increased substantially in respect of both ferries and cruise operations. Other shipping accidents involve vessels carrying out research and survey and service operations and are affected by economic deregulation.

Table 9.6
Water Accidents and Fatalities

	Average 1985-87		Average 1989-91	
	Accidents	Fatalities	Accidents	Fatalities
Commercial	366	1	434	19
Passenger/ferry	38	0	58	0
Other	96	2	108	3
Accidents aboard ship	225	24	332	24
Total accidents	725	27	932	46
Total incidents	150	0	233	0

Source: Transportation Safety Board of Canada. Fishing vessels are excluded from the table, but fatalities were much less in 1989-91, averaging 18 per annum than in 1985-87, when the annual average was 28.

Accidents aboard ships have increased considerably between the two time periods, but fatalities have remained constant. Examples of such accidents include persons caught or struck by cargo or machinery, or falling overboard, on deck or off the quay. Injuries in this category, and thus the total number of accidents, are susceptible to incomplete reporting. Furthermore, it has been claimed that such accidents are not really transport-related and should be classified as industrial accidents.

Marine incidents mostly consist of near-collisions but also include occurrences such as near-groundings, cargo slippage and machinery failure. Although these have shown a substantial increase, this is again considered to be the result of more diligent reporting of accidents.

Summary

The content of this section can be summarized as follows:

1. There is no evidence to suggest any general deterioration in safety as a result of economic deregulation.
2. Highway fatalities have been declining for several years in Canada, due to fewer accidents involving private automobiles. Fatalities associated with tractor-trailors have not changed since deregulation. This may be regarded as slightly disappointing, in view of the improvements being implemented under the National Safety Code, but perhaps it was too early to expect to see change by 1990. There has been an

increase in the number of fatalities associated with the operation of straight trucks of weight in excess of five tonnes. These are used primarily in intraprovincial trucking and private trucking.

3. In the air mode, the averages for the years 1989-91 are dominated by two major accidents, the 1991 Nationair crash in Saudi Arabia and the 1989 Air Ontario crash at Dryden. The Dryden crash has been investigated in depth by Mr. Justice Moshansky.
4. There is no evidence of any overall deterioration in railway safety. However, there has been an increase in the number of fatalities resulting from rail/highway crossing accidents, but it is difficult to attribute this to deregulation. There has also been an increased reporting of rail accidents and incidents relating to dangerous goods. While this is partly due to more complete statistical coverage, it is possible that reduced railway employment could have affected the amount of monitoring in this area.
5. Examining marine accidents in the context of the economic deregulation of transport is rather an academic exercise, as the 1987 legislation introduced negligible change in the water mode. Marine transport safety does not appear to have shown any deterioration.

2. TRANSPORTATION AND THE ENVIRONMENT

Although examination of this issue was not specifically required of the NTARC, research was undertaken to address the impact of transport on the environment and the impact of environmental legislation on transport. This section examines the role of transportation in causing pollution problems and the repercussions of federal environmental legislation on transport operations and investment.

The research carried out in this area had three objectives: reviewing the impact of transportation systems on the environment, evaluating the impact of the *NTA, 1987* on the environment, and assessing the impact of Canadian environmental legislation on transport systems. The results associated with each objective are summarized here, based on a lengthier report prepared by Sypher:Mueller entitled *Environmental Instruments and Transportation*. It must be noted that a complete analysis of the impact of the entire modal cycle on the environment cannot be easily compiled as data are either not available or are aggregated to a level that is not representative of the modal function.

Impact of Transport Systems on the Environment

Transportation systems and operations contribute to a host of environmental problems, primarily as a result of airborne emissions, toxic spills, use of land resources, waste disposal and noise.

The industry is a major source of air pollutants that result in global warming, stratospheric ozone depletion and ground level ozone formation, acid deposition, carbon monoxide and airborne toxic chemicals. The commercial goods transportation sector is a lesser source of air pollution than passenger vehicles, light duty trucks and vans. However, trucking is the major freight transport contributor to air pollution, because of the number of vehicles and the concentration of their operations (especially in industrialized urban regions).

In freight transportation, carbon dioxide — a major contributor to global warming — is primarily a result of trucking operations (because of the number of vehicles). However, the air mode contributes the most on a tonne-kilometre basis, because of the high energy consumption of aircraft. Stratospheric ozone depletion is directly attributable to emissions of nitrogen oxides from aircraft, while ground level ozone depletion is a result of nitrogen oxides and volatile organic compounds emitted by surface transport. Again, trucking is the major overall contributor to ozone depletion, because of the number of vehicles, while the air mode is most significant on a per vehicle basis. The rail and marine modes in all cases are significantly more environmentally sound.

The release of toxic chemicals is associated with the burning of fuels in engines and through spills. Diesel engines are the most suspect, because of the excessive benzene and hydrocarbon production associated with their design. Trucking and rail are the most dependent on diesel power. Toxic spills are primarily attributable to trucking, since the majority of toxic chemicals are carried by truck and the mode is prone to the greatest number of accidents. However, the impact of rail, and especially marine spills, is much more severe because of the tonnage being transported.

Oil and fuel spills are usually associated with the marine mode, because of the large volumes carried by that mode and the more severe impact they have on water than land. While collisions and sinkings represent the most catastrophic level of risk, the major impact of fuel spillage is through normal vessel operations, including loading, tank washing and waste water discharges. Oil spills on land attributable to transport are primarily a result of trucking, but the vast majority of spills occur via pipelines and at the production site. Land spills are generally of less concern since they are easier to contain than those in water and are generally smaller.

Transportation's use of land resources can have a deleterious effect on the environment, especially terminal operations. Highways alter storm run-off thus increasing erosion, and, along with railways and airports, can disrupt wildlife corridors and habitats. Railway yards and marine port facilities occupy valuable urban land space and contribute significantly to urban visual blight. Marine ports may damage wetland and fishing habitat, while airports use up valuable agricultural and recreational lands.

Waste disposal from transport operations, e.g., used tires, batteries and waste oil contribute to local pollution problems, especially in urban areas where terminals and maintenance facilities are located. Noise pollution from transport operations is

attributable primarily to road and rail, because of the proximity of human activity to highways and tracks. The noise “print” from aircraft departures is a problem in major cities; however, the location of airports and increased sound abatement technology in the aircraft industry is reducing the overall noise impact of aircraft operations.

Impact of the *NTA, 1987* on the Environment

It is difficult to isolate the impact attributable to deregulation from that attributable to changes in overall economic activity. The quantification of the overall impacts of deregulation is neither practical nor possible; as adequate methods and standards have not been developed. The main types of changes in transport operations induced by the *NTA, 1987* that impact on the environment are:

- the overall level of transportation activity;
- modal shifts in transport operations;
- overall increased efficiency of transport systems because of load levels and fleet operations; and
- changes in operational procedures to minimize the potential for accident risks.

At least until the recession, the growth in transportation since the Act had occurred in the trucking and air modes, with a subsequent increase in short-term pollution problems associated with emissions. It is difficult to attribute other pollution problems to deregulation — the window for measurement is too short and the problems cannot be measured effectively or have not yet appeared.

The two most prominent factors affecting transport efficiency are fuel efficiency and load levels. Increases in efficiency due to technology have led to lower emissions, with trucks and aircraft burning less fuel per tonne/kilometre transported than in earlier years. Over the long term, competition within and among the modes may also ensure operating efficiency and optimal load levels.

The increase in passenger air travel has, overall, had a negative impact on the environment, because of the increased number of aircraft operating and the increased number of take-offs and landings at major airports. Pollution from aircraft is most noticeable at terminals, even though stratospheric pollution is a result of high altitude operation.

It is safe to say that any substantial increase in transport activity will lead to an increase in accidents. Since certain modes (trucks) have higher spill incidents but are prone to lower levels of catastrophic risk, it can be argued that the cost of short-term environmental damage is offset by low levels of overall risk. The decision as to which is preferable — low level pollution or a high level risk of disaster, is a matter of judgement.

Overall, there does not appear to be any clear link between regulatory reform and changes in the impact of transportation on the environment. Deregulation could be the best route for minimizing environmental impacts if it improves efficiency and reduces overcapacity in the transportation system. Higher efficiency results in lower emissions, as less fuel is used and corresponding negative environmental impacts are minimized.

Environmental Legislation and Transportation

Environmental legislation is embodied primarily in two Acts under federal jurisdiction, the *Canadian Environmental Protection Act (CEPA)* and the *Canadian Environmental Assessment Act (CEAA)*. The *CEPA* controls the introduction of new substances into Canada as well as the life cycle of toxic substances and their release into the environment. The *CEAA* deals with assessing the environmental impact of any proposed project which includes land, water or services provided by the federal government. The Minister of the Environment is charged with ensuring that adequate environmental assessment is undertaken and that the environmental impact of any project is duly considered. Both of these Acts apply to all industries, including transportation, thus ensuring that environmental concerns are addressed properly.

Each of the transport modes is also affected by specific legislation which governs their safe operation (e.g. *Canada Shipping Act, Railway Act*). This legislation ensures that the transport operations take into consideration the safety of people and also the physical environment.

In addition to these acts, there are international agreements aimed at ameliorating global or international environmental problems. These international agreements may have a direct impact on the policies, licensing requirements, emission standards and other matters in the purview of federal transportation organizations. Compliance with the agreements entails that transport legislation reflects these commitments. There are also regional or local plans and codes designed to minimize any adverse environmental impacts of transport activities. Transport operations and infrastructure requirements must conform to these requirements, which may conflict with federal statutes. The problems associated with conflicting legal jurisdictions plague industry in general; transport is particularly susceptible as it most often involves multijurisdictional operations and investment.

Of all the current environmental legislation the *CEAA* affects transportation the most, as it necessitates an environmental review process for virtually any transport project. The most visible impact will be the delays resulting from the review process and the associated costs of administration. Compliance with the review procedure is expensive and cumbersome, as firm guidelines have yet to be established. There is the likelihood that follow-up monitoring and reporting will be required for all projects subsequent to completion. The costs associated with this will have to be borne by the mode in question. There is also no clear resolution of these issues, as a time limit for the reviews and who is to pay for certain types of environmental studies. In practice, the

proponent of the project is likely to have to pay for many if not all base-line study costs. The costs associated with delays and the inability to make adequate planning decisions will have to be borne by the transport industry, with subsequent losses to competing industries —especially in the U.S.

The *CEPA* will also have a significant effect, mostly on transport operations. The major components of the Act that affect transport involve the control of gasoline, fuel additives and ozone depleting substances, fuels information, ocean dumping regulations and the import and export of hazardous wastes. It will result in increased inspections, more restrictions on fuel and other products used, stronger enforcement mechanisms and more information requirements. While they will increase the overall costs of compliance, these regulations are generally in harmony with those in the U.S. and should not place Canadian carriers at a competitive disadvantage.

The *CEPA* and the *CEAA* address the environmental impacts associated with all industries in Canada. The current legislation appears to be fair, strict and in keeping with international conventions and the goal of sustainable development. Any additional concerns regarding the environment and transport would be best addressed in the legislation specific to each transport mode or to the environment itself. This would avoid confusion, overlapping jurisdictions, and additional costs to the industry.

The overall impact of environmental legislation will be to increase the costs associated with transport investment and operations. While all industries will have to incur similar costs, transport operations will not be adversely affected by the *CEPA* relative to competing industries. However, the inefficiency associated with the environmental review process could place the Canadian transportation system at a competitive disadvantage vis-à-vis that of the U.S.

Summary

The main conclusions from the research can be summarized as follows:

1. Transportation operations are a major contributor to air pollution, toxic chemical and fuel spills, the adverse use of land resources, waste disposal and noise.
2. Deregulation of the transport industry may lead to increased operating efficiency, reduced excess capacity and lower fuel use and emissions. This could have a positive impact on the environment.
3. The *CEPA* will increase the costs of transport operations, because of the costs associated with substance controls and fuel additives. It will not adversely affect the Canadian transport industry versus the U.S. industry.
4. The *CEAA* will have the greatest impact on the Canadian transport industry, as the costs associated with the environmental review process and subsequent delays to

investment will have a negative effect on Canada's ability to compete against the U.S. transportation industry.

3. TRANSPORTATION ACCESSIBILITY FOR PERSONS WITH DISABILITIES

In addressing accessibility, this section draws upon data concerning persons with disabilities, which have recently been released by Statistics Canada. It also refers to the submissions received by this Commission that commented upon accessibility and summarizes recent legislative developments in the area. The section concludes with the directions suggested by these developments for accessibility strategies.³

New Data on Persons with Disabilities

In Statistics Canada's Health and Activity Limitation Survey (HALS), it is estimated that 4.2 million Canadians considered that they had some degree of disability. The survey, which is Canada's primary statistical source of information concerning persons with disabilities, was conducted in 1991. The survey results are being released in segments as they become available, and the initial release describes the general population of Canadians with disabilities in terms of the nature and severity of their disability, as well as their age, sex, and place of residence. Statistics Canada plans to release the information collected regarding transportation and persons with disabilities in the spring of 1993.

In the meantime, HALS provides the most up-to-date portrait available of the situation of persons with disabilities in Canada. Information from the 1991 survey can be compared with that collected in the previous HALS (1986) to identify changes in the population. The most evident change is in the number of Canadians who identify themselves as having a disability (4.2 million). This represents 15.5% of the total Canadian population, compared with 13.2% (3.3 million) who reported having a disability in 1986. Statistics Canada suggests that this increase is due to the following factors:

- the Canadian population is aging and consequently demonstrating a somewhat higher rate of disability;
- the survey methodology for HALS altered between 1986 and 1991 and the newer approach allowed for a more comprehensive enumeration of persons with disabilities related to a mental health condition or a learning disability; and
- the recent increased awareness of disability in society at large has made people more willing to report their activity limitations and the barriers they encounter in their everyday lives.

Only the first of these three factors signifies an actual increase in the number of persons having a disability. While no analyses have been conducted to identify the precise

increase that can be attributed to the fact that the Canadian population is aging, it is important to point out that the increase has not come in the "seniors" age group. The issues relating to transportation accessibility cannot be viewed as primarily "seniors issues." While the over 65 age group has the highest rate of disability, in absolute terms the largest number of Canadians with disabilities is in the 15 to 65 age group, as portrayed by Figure 9.1. However, these Canadians in this "working age" group generally classify their disabilities as mild.

Figure 9.1
Degree of Disability by Age Group

Canadian Population (thousands)



SOURCE: The MERLIN Group with data from Statistics Canada's Health and Activity Limitations Survey, 1991.

Issues

The NTARC received 18 submissions that discussed substantively the subject of transportation accessibility for persons with disabilities. Nine of these were from governmental organizations at the federal, provincial or municipal levels. Six came from organizations representing persons with disabilities and three came from carrier organizations. It should be noted that the NTARC mandate covered only federally regulated intercity passenger transport and not urban transport, which is a subject of major importance to Canadians with disabilities. The following discussion summarizes some of the themes that were treated in the submissions.

a. Mobility with Dignity

Several submissions emphasized that the opportunity of using transport services was insufficient in itself.⁴ Simple access was not the point. A person with a disability also needs to be able to travel in a dignified manner, in the same way that other travellers do, to the extent that this is possible. This theme was closely linked to another point: while it is important to be able to access transportation, the manner of this access is equally important. Many groups now argue that segregating travellers with disabilities from mainstream society by giving them a parallel but separate service excludes them from the normal travel experience that allows them to feel part of society. This argument relates primarily to urban transit systems, and its main relevance for the federally-regulated modes is that the manner in which accessibility is achieved is as significant as the fact that it has occurred.

b. Costs of Disability

Many submissions made the point that the human costs of disability are high. Transportation is seen by most organizations that are involved with disability issues as one of the key areas in which barriers to access affect an individual's entire life style and ability to independently participate in most aspects of Canadian life. The costs to society are high in that it does not benefit from the contribution that some persons with disabilities could make if they were not hampered by lack of transportation accessibility. Many of the day-to-day transportation issues relate to local services, such as accessible taxis and para-transit. However, access to intercity travel is also needed.

The submissions outlined the expenses of intercity travel for persons with disabilities. The average income of persons with a disabilities is lower than the Canadian average. When a person with a disability requires an attendant, particularly on a flight, additional costs for the attendant's travel impose a significant burden on the traveller. Consequently, several submissions propose "two-for-one" air fares when a traveller with a disability needs an attendant.

c. Attitudes of Carrier Personnel

Another theme that was frequently explored in the submissions related to the importance of the attitudes of carrier personnel towards travellers with disabilities. To an extent, the most pressing concerns may be somewhat relieved by the publication for comment by the National Transportation Agency of proposed regulations governing the training of personnel for the assistance of persons with disabilities. The submissions make it clear that sensitivity in providing assistance to travellers with disabilities and knowledge of certain techniques for providing this assistance are vital determinants of the acceptability of a particular travel experience.

d. The U.S. Model

Several submissions refer to the *Americans with Disabilities Act 1990*. Opinions differ somewhat on its relevance to the Canadian situation. Some organizations, such as the

Canadian Human Rights Commission, suggest that the NTARC should consider its approach, including the specification of timetables requiring carriers to meet certain standards of accessibility. Other submissions suggest that this rigid approach is not appropriate to the Canadian situation, and that negotiation and compromise will ultimately result in the best form of improved accessibility.

e. The National Transportation Agency Role

Several submissions made a point of expressing positive reactions to the Agency's efforts regarding accessibility. It is recognized that the Agency has a difficult role to play in mediating between the evident needs of persons with disabilities and the carriers, who currently can make a case for financial hardship.

Related to this theme is the point that organizations representing different interests relating to accessibility agreed that the coordination between government, carriers, equipment suppliers and organizations representing persons with disabilities, is extremely important. The Agency is seen as playing an important and effective co-ordination role.

Recent Legislative Changes

Bill C-78 was tabled in the House of Commons in May and passed in July of 1992. This omnibus bill amended six pieces of federal legislation in relation to the situation of persons with disabilities. The legislation which was amended included:

- the *National Transportation Act, 1987*;
- the *Canada Elections Act*;
- the *Access to Information Act*;
- the *Privacy Act*;
- the *Criminal Code*; and,
- the *Citizenship Act*.

The amendments to the *NTA, 1987* are to the two key sections in the Act which deal with accessibility: section 3 and section 63.1 to 63.3. Section 3, the policy statement, now mentions persons with disabilities specifically:

It is hereby declared that a safe, economic, efficient, and adequate network of viable and effective transportation services *accessible to persons with disabilities...* is essential to serve the transportation needs of shippers and travellers, *including persons with disabilities...* {addition italicized}

Section 63.1 to 63.3 provide direction to the National Transportation Agency concerning how it is to implement its role in improving access to transportation services for persons with disabilities. The Agency is given the authority to:

- make regulations;
- communicate information about these regulations to persons with disabilities;
- amend these regulations from time to time;
- exempt certain entities from the regulations;
- co-ordinate its activities with the Canadian Human Rights Commission to foster complementary policies and practices and to avoid jurisdictional conflicts;
- initiate investigations to determine whether there are undue obstacles to the mobility of disabled persons; and
- if the Agency determines that there are undue obstacles to the mobility of persons with disabilities, it may order corrective measures, payment of compensation, or both.

It should be noted that these are substantial powers which provide the Agency with considerable scope for action. They do not have the specificity of some of the powers awarded U.S. agencies through the *Americans with Disabilities Act, 1990*; however, combined with the *Canadian Charter of Rights and Freedoms* and the *Canadian Human Rights Act (CHRA)*, they present a definite statement of the government's intention to improve transportation accessibility.

Summary

As discussed above, the number of Canadians with disabilities in age groups characterized by high travel demand is substantial and likely to increase as the "baby boom" ages. Between the demands of individuals whose well-being and contribution to their society is being limited by inaccessible transportation services and the financial constraints of Canadian governments and carriers, a compromise must be negotiated which is fair to all parties. This is an enormous and extremely important challenge.

While a great deal of time and effort could be expended on refining and adding to existing legislation, it now appears that the legislative base is sufficient to allow for significant progress. At the federal government level the two key players in the transportation area are the National Transportation Agency and Transport Canada. Both have established advisory groups with diverse representation from many of the

stakeholders.⁵ Because attitudes are so important in this area, solutions must be acceptable to the different parties affected. Consequently, consultation and negotiation should be given the best possible opportunity to improve transportation accessibility.

NOTES

- 1 This water figure does not include recreational boating accidents; it is estimated that there are some 200 such fatalities per annum. However, recreational boating is not really relevant to the effects of economic deregulation on transport safety.
- 2 A special tabulation was provided by the Surface Group, Transport Canada, relating to the two years 1987-88. Calculations from these data showed an average of 1.28 deaths for each fatal accident involving only passenger cars; 1.23 deaths for fatal accidents involving a tractor-trailer and a passenger car; and 1.07 deaths for accidents involving a passenger car and a large truck. The higher number of deaths when only passenger cars were involved is because there are more occupants in the average passenger vehicle than in the average commercial vehicle and thus more people at risk. The deaths in accidents involving passenger cars and commercial vehicles are, as would be expected, predominantly among the occupants of the passenger cars.
- 3 This section of the report was prepared by the Merlin Group of Kanata, Ontario.
- 4 Submissions making this point included those from Integrated Employment Consulting Services (pp.6-7) and the Coalition of Provincial Organizations of the Handicapped (p.20).
- 5 See *Directions: Report of the Royal Commission on National Passenger Transportation*, November 1992, pp.210-211.

10

Research on Legal Issues

INTRODUCTION

The economic research (conducted by Commission staff and outside contractors) was designed to find facts on a wide range of transportation issues and to serve as building blocks for the Commission. The preceding chapters in this volume summarize the details.

The challenge for legal researchers was to consider possible solutions for emerging problems. Three of the studies concern rail, three relate to air and two cut across modal bounds.

The three rail studies concerning abandonment, short lines and corridor maintenance all focus on related issues. When the policy option of increased subsidization is no longer fiscally available, the rail studies consider whether alternatives exist through which railways may be permitted greater freedom to manage infrastructure by facilitating rail abandonment while fostering short line services or maintaining rail corridors if in the public interest.

Just as the three rail studies relate to broad policy issues such as freedom to exit and recognition of public interest factors, so also do the three aviation studies relate to broad issues before the Commission. They too suggest possible solutions to forces engendered by an increasingly international market.

The studies concerning slot allocation and international air route designation proceed from the perception that economic deregulation may not of itself open the door to competition. In an era of deregulation, access to infrastructure may be as much a key to competition in aviation as rigid economic regulation once was. Consider, for example, the U.S. experience of fortress hubs at strategic airports where slots and gates are controlled by a few carriers and the Canadian experience of ministerially imposed allocations at Pearson airport, the Intair gate case at Montreal and the rise of local airport authorities.

The dominance of international air transport by political regulation has only recently been challenged by the desire of major air carriers to restructure their operations to meet international market demands. The existing treaty international air route allocation procedure may be as much a barrier to competition as is limited access to infrastructure. Trends to globalization threaten to overtake the government's ability to ensure market access with existing regulatory measures.

International consortia in aviation (and indeed in other modes) are not presently well provided for in domestic Canadian or international law. The study

concerning globalization analyzes how such consortia might be accommodated so that the Canadian market may be best served by either "made in Canada" airlines or other carriers.

Having looked ahead in the first six studies, the Commission returned to particular aspects of the present legislation in the others. One of these seeks to determine whether the Canadian transport industry may be over-regulated. It analyzes overlaps between the *Competition Act* and the *NTA, 1987* to determine their respective utility. The other considers the experience and usefulness of the present public complaint procedures under the *NTA, 1987*.

The balance of this chapter provides an overview of these eight legal research studies. While the results were instructive and of great use to the Commissioners in their deliberations, it should be understood that the following text summarizes the authors' views, not all of which are reflected in the Commission's Report.

RAIL LINE ABANDONMENT

Issue

This study examines the efficacy and adequacy of the rail line abandonment provisions of the *NTA, 1987* and the National Transportation Agency's administrative practices and procedures with respect to these provisions in light of the goals of the Act and comments made in submissions to the Review Commission. Where it is concluded that the existing statutory/regulatory rail line abandonment scheme can be improved, suggestions are made as to how the statute/regulations could be amended to incorporate such improvements.

Analysis

Railway trackage in excess of traffic requirements has been a feature of the Canadian railway system for most of the century and has been a subject of numerous inquiries into railway problems. The necessity for railways to rationalize their networks to maintain their commercial viability has grown in intensity with the development of competition from other modes. Regulation of rail line abandonment has been subject to major amendment (principally in 1967 and 1987) in order to improve the commercial position of the railways while continuing to protect the public interest in the operation of particular lines.

The current abandonment scheme is recognized by both railways and the staff of the regulatory Agency as a more efficient and economical process than the previous scheme. There are, however, various ways in which the operation of the existing scheme could be improved to meet the objectives of the *NTA, 1987*.

Meetings were held by the author with personnel from both CN and CP to review their submissions to the Commission and explore their concerns with the abandonment process. As well meetings were held with staff from the Agency to gain the regulator's perspective.

The railways criticize the existing scheme as being unnecessarily restrictive of their ability to make appropriate commercial decisions and to allocate their resources in the most effective manner. The railways consider this restriction a significant factor that should be addressed on an urgent basis since, together with other factors, it forms part of a process which calls into question their continued commercial viability. The railways propose deregulation of the abandonment process.

Staff of the regulatory Agency consider criticism of the existing abandonment scheme to be to some extent misguided, since in most cases the scheme provides for the efficient disposition of applications. Agency staff recognize, however, that various improvements to the scheme could be made including the "mothballing" of lines in which the public interest is based on potential rather than present use and the transfer of such lines from the railways to the government (i.e., federal, provincial or regional) which advocates retention.

Rather than being able to meet with all parties who made representations concerning the subject of abandonment, the author was limited to a review of their submissions in this regard. These submissions were made by a broad range of groups, including shippers, trade associations, public interest groups, all levels of government, and the railways.

Shippers and other parties who made submissions to the Review Commission expressed varied concerns. Approximately half of the submissions advocated continued regulation of abandonments in order to protect the public interest.

Conclusions

The abandonment process involves two distinct determinations. Is a line commercially viable and, if not, should it nevertheless be operated in the public interest? The author considers that the former decision is one best made by the business enterprise operating the line, and the second by a government authority. The present process intermingles the two determinations in a way which requires the National Transportation Agency to examine issues of commercial viability. As a result the current process puts great emphasis on costing issues and places the railways in an adversarial position to public interest groups and to some extent the Agency itself.

The author observes that the present scheme places multiple demands on the Agency. It is required to assess whether a line is economic, it is required to determine whether a line should be operated in the public interest, and it is required to make determinations as to the actual cost of service on a particular line. The Agency is thus called upon to make determinations that go to each of the three conceptual issues outlined above. The author views the first two types of decisions, the commercial and the public interest, as decisions not to be made by one body. The third decision, the determination of operating costs, is one that is seen as a basis for both the commercial and public interest determinations. However, determining cost as a basis for a commercial decision may require consideration of different factors than those to be

considered for matters of public interest decisions. As the present scheme intermingles the two types of decision, much conflict is generated in determining how to assess costs, and to some extent each abandonment case becomes an adversarial costing inquiry. The author believes that many of the strains which are caused by the operation of the existing system would be alleviated if the role of the Agency were limited so that it was no longer required to make all three determinations.

It is the author's view that the present regime could benefit from modification. In fact, the significant question is considered to be not whether there should be amendments but the scope and nature of those amendments.

Two options for reform are offered for consideration. The first is a proposal for what is characterized as deregulation of the abandonment decision. The second assumes continuance of the existing scheme and proposes various amendments to make the system work more effectively in the interests of the railways, shippers and the general public.

The first alternative involves a determination of whether there should continue to be a regulatory scheme by which the commercial decision of a railway to abandon a line is subject to approval by the government or an administrative agency. If it is determined that such a scheme is no longer required, there would still remain issues relating to the determination of a public interest in a line and to the determination of the costs of service of a particular line to be addressed. Thus, even what might otherwise be characterized as the deregulation of network rationalization would, in the view of the author, continue to require a role to be played by the Agency in dealing with the consequences, from the perspective of the general community and the public interest, of a railway's commercial decision to abandon.

Under such a proposal, the operating railway alone would make the commercial decision of whether or not a line should be abandoned and then give notification to the Agency of its intention to abandon. The Agency would then hold an inquiry into whether the public interest requires that the line be continued or whether alternative use should be made of the railway corridor. The Agency would thus be able to recommend the "mothballing" of the line or other alternative use in the public interest.

The railway would only be involved in the process to the extent of providing whatever information the Agency requires to make its public interest determination. It is also suggested by the author that the Agency have the discretion to provide intervenor funding to participants in the public interest review.

Once a determination has been made by the Agency that a line should be continued, or the corridor preserved, the line could be purchased by the government from the operating railway at net salvage value. Although the suggestion that provincial governments should acquire such lines has considerable merit, jurisdictional concerns probably favour initial acquisition of them by the federal government. Once such a line has been acquired, the owning government would put the contract to operate it out to tender. The author agrees with the suggestion that the operating railway should be

obliged to submit a tender. If no satisfactory tender is received, the owning government would have to either undertake the operation of the line directly or increase the amount of subsidy it is prepared to pay to ensure operation of the line.

In the author's view, such a scheme is consistent with the development of Canadian transportation policy and meets the objectives of the *National Transportation Act, 1987*. The author considers that it is an appropriate alternative to the existing abandonment scheme.

Alternatively, if it is thought to be most appropriate to continue with a scheme which also regulates railway decisions to abandon by submitting them to prior approval by government agency, the author offers various suggested amendments to the *National Transportation Act, 1987* and the Railway Abandonment Regulations, which are designed to streamline and improve the existing regime.

FACILITATING SHORT LINE RAILWAY TRANSACTIONS IN CANADA

Issue

This study assesses whether there exist legislative, institutional or economic barriers to the creation of short line railways in Canada. Consideration is given to what measures are available through legislative reform to encourage a more active short line market in Canada, if such is determined to be desirable, and to what governments (federal and provincial) can do to promote such development. Among the factors considered are the apparent disincentives provincial governments have to permit the establishment of short line rail in light of concerns for the long-term viability of short lines after the removal of federal regulatory and financial supports. Consideration is also given as to methods which might exist to remove/negate such disincentives.

Analysis

In Canada to date, only three modern, independent short line railways have been formed: (1) the Central Western Railway Corporation in Alberta from line purchased from CN and CP, (2) the Southern Rail Cooperative in Saskatchewan from abandoned track, and (3) the Goderich-Exeter Railway Company Limited in Ontario from line purchased from CN. One other sale, that of the Sydney-Truro line by CN, has experienced considerable political opposition, particularly from the Province of Nova Scotia. After undergoing a lengthy inquiry before the Standing Senate Committee on Transportation and Communications in February 1992, CN has selected a final bidder for this line and at the time of this study CN was entering the final stages of negotiations, over one year after initial bids were tendered.

The bulk of this study examines public policy constraints or inhibitors to the evolution of a rail asset or operations divestiture market in Canada. These constraining measures are stated to be numerous and serious. They exist at both the federal and

provincial levels. These constraints have, in the author's view, considerably retarded the devolution of rail assets to third party businesses which are likely to use them more productively.

Given an apparent lack of activity in the Canadian short line railway industry, this study examines the underlying structure of the market for short lines in the U. S. and Canada and suggests regulatory reforms which might facilitate enhancement of the Canadian market. To the extent that the current regulatory regime poses obstacles to the formation of viable and efficient short line railways in Canada, it thereby poses obstacles to the development of an efficient transportation system and works against the objects of the *NTA, 1987*.

Through interviews with short line operators in both Canada and the United States and with Canada's national rail carriers, a review of relevant short line literature, comparisons of Canadian and U.S. regulation, and discussions with NTA officials, insights were gained into the characteristics of the short line market in the United States and Canada as well as of the factors, regulatory and otherwise, which are seen as impeding the growth of the short line market in Canada. These factors are discussed in Part II of the study. To the extent that such factors can be affected by regulatory reform, at both the federal and provincial level, such reforms are proposed and their merits discussed in Part III. Part IV examines the delicate question of whether public policy should actively promote or accelerate the divestiture of federal railway assets or operations. A summary of conclusions and recommendations appears in Part V.

The study also presents a model for uniform provincial railway legislation consistent with the goals and provisions of the federal legislation.

Conclusions

In terms of market strengths, the study concludes that there would appear to be no significant structural problems with respect to the availability of potential short line purchasers/operators or the availability of financing. Therefore, public policy measures to increase potential purchaser interest or to generate lower cost acquisition or greater operations financing would not appear to be required.

Additionally, no special measures would appear to be required to prevent a former owner, upon which the new short line operator depends for main line services, and in some cases, rolling stock, from exercising market power to siphon away (through rates for the services it supplies) any increase in profitability or productivity the new short line operator generates on that line. Ensuring the availability of the current competitive access provisions of the *NTA, 1987* to short line customers would appear, in the author's view, to be sufficient.

The study suggests a package of measures to remove legislative, institutional and economic obstacles to the development of a Canadian short line transaction market and to create incentives to accelerate the development of this market. These measures primarily include amendments to federal and provincial legislation and the suggestion

that Cabinet could direct CN to identify the core elements of its rail system and to begin a process of bona fide auctions of its non-core rail system elements where potential purchasers express serious interest.

First, the author suggests amendments to the *NTA, 1987* designed to (1) streamline the conveyance of rail lines to short line railways, (2) allow VIA Rail to contract to operate on the track of a provincial railway and (3) extend the application of provisions regarding running rights, competitive line rates, interswitching, joint rates and abandonment to provincial railways.

Also suggested to facilitate short line development is an amendment to ss. 79(1) of the *Railway Act*, which subordinates all railway secured debt to penalties due under that Act and to "working expenditures." As well, amendments to the *Western Grain Transportation Act*, the *Maritime Freight Rates Act* and the *Atlantic Region Freight Assistance Act* designed to extend their application to provincial railways are proposed. It is also suggested that the *Canada Labour Code* be amended to exempt short lines from successor rights provisions. The exemption would have to be mirrored in provincial legislation imposing successor rights.

MECHANISMS FOR MANAGING ABANDONED RAILWAY RIGHTS OF WAY IN CANADA

Issue

If, in the course of rail line abandonment, the continued existence of certain rail corridors is assumed to be in the public interest (such as for recreational purposes, strategic purposes or possible future commuter transit use), this study considers how from a legal and administrative policy perspective such rail corridor maintenance might be achieved recognizing Canadian constitutional realities and the common/civil law duality concerning real property.

Analysis

The purpose of the study is to determine whether it could be in the public interest to maintain certain rail corridors or rights of way when rail lines are abandoned, and, if so, how this could best be achieved. The study considers the law and public policy relevant to the issue.

The first part of the study considers general and constitutional matters bearing upon the issue, while the second deals with the development of mechanisms that might satisfy the objectives in question.

The study examines the existing legal framework governing abandoned lines and the lands on which they are located. The *NTA, 1987*, the *Railway Act*, the *Canadian National Railways Act* and the *Railway Safety Act*, as well as relevant regulations, were examined. The study consulted legal authorities and many individuals possessing knowledge of the issue in the private sector and in both federal and provincial government departments or agencies.

Consideration is given to both consensual and prescriptive legal mechanisms by which post abandonment control over corridors might be asserted. Relevant federal and provincial statutes and regulations were considered in this context. Given the duality of the Canadian legal system, the issues are examined in terms of both civil and common law.

Finally, a number of possibly relevant foreign models are described and discussed.

Conclusions

First, it is clear that lines being abandoned are located largely on lands owned by the railway companies operating such lines.

Problems of title do not have the same importance in Canada as they may have in the United States. Subject to Indian land claims and private disputes relating to title, it can generally be said that Canadian railway companies or the Crown owns corridor lands on a free and clear basis.

The right-of-way corridors are generally comprised of narrow linear strips of land found throughout the transcontinental rail system.

If notice of abandonment is opposed, the *ATA, 1987* requires that the railway justify such intended action on the basis of economics. If present or prospective economic operation of the line is not established, abandonment can occur and no federal or provincial statutory provisions exist governing the disposition or fate of the right-of-way corridor.

Though keen to rid themselves of continuing liability for matters occurring on corridor lands after abandonment, railways remain free to sell (or not sell) such lands to whomever they choose. In the past, and according to informal protocol only, railways have offered such lands to the various levels of government and to adjoining landowners. No compulsion exists for this to occur even if attractive public interest uses for the corridors are identified.

Constitutional and property law considerations limit the extent to which federal or provincial authorities can act unilaterally to address the corridor issue. The study suggests that federal-provincial co-operation (possibly under the auspices of the Agency because of its present role in the abandonment process) would be the best method by which to identify and prioritize public interest uses for such corridors and to identify those corridors which might have a temporary and permanent public interest use. Given a joint federal-provincial approach, public interest uses would not be limited to just those falling within federal jurisdiction.

Under this scenario, the Agency could be empowered to require the abandoning railways to offer the corridors to those who would put the lands to an identified public interest use. Failing an agreement for sale being concluded between the railway and such public interest user within a finite period, consideration might even be given to empowering the Agency to determine a fair price and contractual terms based upon statutorily established criteria.

SLOT ALLOCATIONS AND OTHER AIRPORT INFRASTRUCTURE RESTRICTIONS

Issue

Against the backdrop of such recent developments as the advent of autonomous local airport authorities, this study examines the existing legal and policy mechanisms by which access to airports is controlled and, in light of recent practice and history (such as at Toronto-Pearson), makes recommendations concerning what alternative legal and institutional structures might better promote more competitive and efficient access by air carriers to airport infrastructure.

Analysis

Given the crucial issues of airspace capacity and airport infrastructure capacity at many of the world's major airports, this study focuses upon slot allocation as being potentially one of the dominant aviation problems of the 1990s for governments.

The principal factors identified as forcing attention to this issue are shortage of airspace capacity at airports, shortage of runway capacity, deregulation, and environmental limitations. The core issues singled out as requiring resolution in the development of any slot allocation scheme are those relating to the legal nature of a slot and whether it creates a property right in the air carrier, airport operator, or government regulator.

Slot allocation schemes might have several possible objectives: (i) to enable continued growth in air traffic demand so as to provide convenient services to users; (ii) to ensure efficient use of all integrated resources employed in providing air transport services (including airport runway and terminal capacity, aircraft parking capacity, airspace and related resources); (iii) to ensure that there is a balanced network of national and international air services; (iv) to promote competition in the airline industry; and (v) to minimize any negative environmental impact.

Given the potentially conflicting nature of these objectives, the author suggests that priorities will have to be established if more than one of the objectives is applicable to a given airport.

The problem of new entrants is one of the principal issues to be addressed in any slot allocation scheme. In situations where no new slots become available through attrition, non-use or expansion in the airport capacity, there are several ways in which a new entrant may acquire a slot, including:

- permitting incumbent slot users to buy, sell or lease slots;
- providing for periodic lotteries to distribute slots to interested users;
- providing for a certain number of slots to be withdrawn from incumbents and distributed to new entrants or under-represented carriers, possibly by lottery as above;

- enforcing strict “use it or lose it” rules; or
- periodically auctioning slots to the highest bidder.

All of the above processes create problems in the necessary balance between stimulating a competitive marketplace by encouraging new entrants and rewarding carrier investment in infrastructure on a given route with the certainty that the route will be available to provide an adequate return in the future.

This study examines existing mechanisms by which access to airports is controlled; studies different sub-issues having regard, inter alia, to the decision process underlying the allocation of slots; considers foreign experiences (that of the United States in particular) and the applicability of their solutions to the Canadian situation; analyzes the current process with an emphasis on rationing practices and whether such practices are inconsistent with free market entry and competition; considers whether the National Transportation Agency and Transport Canada should have a greater or lesser say over the rationing of airport access and how the new local airport authorities (“LAAs”) should fit in the process; and considers whether the process of establishing workable competition regarding the supply of airport access (slots, gates and other infrastructures) can be completed without major regulatory and institutional reforms. The methodology involved extensive legislative analysis and interviews with airport and regulatory officials.

Conclusions

With regard to the issue of the legal nature of a slot, the study concludes that a slot is a right to use the approach to the runway or the take-off path at a particular time. Since a slot is a permission to use airspace, no property rights can be given in a slot. Its use can, however, be regulated and the jurisdiction to do so falls to the Minister of Transport. So long as the authority having jurisdiction over slots follows rules and policies of broad application in an unbiased manner, the author concludes that its actions cannot be impeached.

Analysis of existing relevant Canadian legislation (*Aeronautics Act*, *Department of Transport Act*, and the *NTA*, 1987) leads the author to conclude that although the federal government has all the powers required to regulate fully all aspects of a slot allocation scheme from a constitutional point of view, and those powers are provided for in the legislation, they have not been clearly and fully outlined. The approach preferred by the study would be to adopt amending legislation that would specifically address the making of regulations dealing with the safe, efficient, economic and competitive allocation of slots.

One of the priority issues identified as requiring attention in the development of an appropriate slot allocation scheme is that of finding the right balance between the conflicting requirements of short-haul and long-haul carriers, on the one hand, and of airports seeking to maximize revenue, on the other hand, while at the same time

responding in a meaningful way to the needs of new entrants and to international obligations under Bilateral Air Services Agreements.

Therefore, if a regulatory approach is deemed desirable, the author suggests that it should be limited to the establishment of a slot allocation scheme by the Minister, the enforcement of which could be carried out by the NTA to the extent that the scheme's "economic" aspects are concerned. The actual administration of the scheme, in the view of the author, should rest with a neutral co-ordinator who would report to the government. The co-ordination would be done in consultation with airport authorities and airlines, as well as with the government agencies dealing with airspace and airport capacity issues.

Of no less importance is the conclusion of the author that slot allocation schemes are only a "band-aid" solution to the real problem of inadequate infrastructure capacity. Moreover, they may also produce a negative impact on the priority accorded to the expansion of facilities which will nevertheless have to occur in the longer term. The author believes that, whenever possible, capacity enhancement should have priority over such demand management systems as slot allocation procedures.

To avoid a band-aid approach, the author concludes that a harmonized and cautious approach would be necessary if a slot allocation scheme were to be designed. The following elements are advanced by the author for consideration:

- Airport and airspace capacity limitations should be defined and declared by the government in consultation with airport authorities and the air carriers.
- With the emergence of the LAAs, there will be a need for an integrated approach by such authorities in the determination of airspace and airport capacity, as well as in the development of schedule coordination procedures and the criteria to be used in the slot allocation process.
- Both capacity and demand management of congestion problems should be addressed, with priority being assigned to capacity management whenever possible. Demand management (i.e., slot allocation and schedule adjustment procedures) should be considered as a measure of last resort where airspace and airport capacity management is not possible or where, pending the implementation of decisions to provide for more infrastructure capacity, the demand for facilities exceeds availability and results in unacceptable levels of system delay.
- Any slot formula adopted in Canada should integrate well internationally with those formulas employed at foreign airports to which Canadian airports are linked by air services.
- When dealing with new entrants, consideration should be given to those entrants which will provide competition in non-competitive markets. Slots might even be taken from incumbent carriers to accommodate a start-up

operation in such circumstances. Where the market is already competitive, it is difficult to conclude that special consideration for a new entrant is an efficient use of resources.

INTERNATIONAL AIR ROUTE ALLOCATIONS

Issue

This study was commissioned to review the process currently in place in Canada for the selection, designation and licensing of air carriers to operate international air routes after such routes have been obtained by the federal government in the course of the international air route bilateral negotiation process. It explores the legal implications of charging an autonomous body (other than Transport Canada and perhaps such as the National Transportation Agency) with authority to play a role in this process.

Analysis

Because of the absence of any multilateral rules and regulations governing international commercial air services (apart from Articles 5, 6 and 7 of the Chicago Convention and the International Air Services Transit Agreement (IATA)) the regulation of international commercial air services is carried out through national regulations and a multitude of bilateral air services agreements (BASAs) between states.

As a result, airline competition and deregulation in the international field is essentially a matter of accommodation and co-operation between states in a bilateral and multilateral context.

In Canada, responsibility for the implementation of the Canadian BASAs rests with the Department of Transport (DOT) and the National Transportation Agency. The Minister of Transport has an exclusive selection and designation authority while the Agency has an exclusive licensing authority. This duality arises from the division of responsibilities over aeronautics under the federal legislative scheme. Since route rights granted in a typical BASA involve selection, designation and licensing, full and efficient implementation can be effected only with both entities participating to the extent of their respective jurisdictions.

Given the wording of section 88(a) of the *NTA, 1987*, the author notes that the issue of selection and designation of a Canadian air carrier leaves unclear the question of who is to make the determination of whether a particular carrier is "Canadian" and thereby may be designated by the Minister pursuant to section 89(1). There is a real possibility of inconsistency between the designating authority and the licensing authority.

The study reviews in detail relevant legislation and regulations for air carrier selection (and designation) mechanisms in four jurisdictions: Canada, U.S., U.K. and Australia. The author notes that these jurisdictions differ in the degree that the aviation

policy-making arm of government is involved in the process of arriving at a final decision.

In Canada, the selection and designation process is fully within the ambit of the DOT in its capacity as the federal transport policy-making body. Decisions are made based on policy considerations (stated or not), which could be as broad or as narrow as the government of the day wants them to be. Subject to the carrier meeting what are essentially "technical" requirements, the role of the Agency is limited to the issuance of the scheduled international licence once designation has taken place.

Conclusions

Although the *NTA, 1987* is unclear as to who is to make the determination of whether a particular carrier is "Canadian," the author concludes that because of the Agency's continuing responsibility to monitor the Canadian status of all carriers to which it has issued a licence, the Agency is in the best position to make that determination. Therefore, given the potential implications under a BASA if the person designated is not Canadian, the study concludes that it would be preferable if the Minister were to seek the advice of the Agency in specific cases.

To ensure that route rights are fully exploited to the economic advantage of Canada, the author recommends the implementation of a "use-it or lose-it" rule. The author concludes that such a rule would be very relevant and useful in promoting competition and improving the chances of access for new entrants and that it ought to apply to all international routes under Canadian BASAs. The study goes on, however, to suggest that appropriate tests/criteria be developed to establish the minimum level of use that could result in loss of route rights.

The author does not believe that the power of the Minister to issue directions to the Agency under section 86 of the *NTA, 1987* can alone be relied upon since such directions may only be in respect of the Agency's "exercise or performance of any of its powers, duties or functions under this Part." This would not include the power to select an air carrier that would be binding on the Minister. In the author's view, the Minister could rely on section 86 to seek Agency advice regarding his selection of an air carrier.

The study suggests that the carrier selection process be separated from the designation process and handled by an independent commission with no input into air policy development. Selection should be by way of hearing or other transparent and public process, applying carrier neutral criteria developed for the commission. To this end a simple "fittest, most able and willing" test is not necessarily the most desirable one since it would favour large established carriers in almost all cases.

In the normal course of events, the selected airline would become the designated airline. The commission might be bound by Ministerial policy statements that are publicly available and not specific to any particular application before the commission, similar to the way in which the Minister may presently set policy binding on the Agency.

For the foreseeable future until the concept of national flag carriers recedes in importance, the author believes that air carriers should have a major say in government's approach to the negotiation of BASAs and that input should be sought from local airport authorities ("LAAs") and other interested groups. As access to specific gateways and internal markets increases with the rise of globalized air carrier ownership, the author suggests the role of air carriers in BASA negotiations will diminish and that of LAAs will increase in importance.

GLOBALIZATION OF AVIATION AND THE EXISTING DOMESTIC AND INTERNATIONAL FRAMEWORK

Issue

This study analyzes whether the current domestic and international legal framework within which aviation exists is sufficiently flexible and responsive to accommodate fully the move towards globalization of aviation. Where the framework is considered insufficient, the study mandate included the identification of legal and administrative impediments and the suggestion of solutions.

Analysis

Currently, the international regulation of aviation is governed by three guiding principles:

- each state has exclusive sovereignty in the airspace above its territory;
- air carriers designated under bilateral air services agreements must be substantially owned and effectively controlled in the state that designates the air carriers; and
- aircraft should have the nationality of the state of registry and the international responsibility for the safe operation of the aircraft should rest with the state of registry.

These principles have resulted in a regime where, with the exception of the right of "innocent passage" (which is governed by the multilateral *International Air Services Transit Agreement*), air services between states are controlled by BASAs. The "nationality" requirement outlined above, in the author's analysis, will continue to determine the future of aviation development unless it is in some way reduced in importance and impact or replaced by another link or other links. The author suggests that this will not be an easy task for international law.

To protect the "nationality" requirement, together with other domestic policy considerations, states have adopted domestic legislation which sets limits on the amount of foreign investments. Such limits may vary from a restrictive low of 25% of voting equity, as in Canada and the United States, to a high of 49%. Moreover, national laws may

also require that the air carrier be "controlled in fact" by their nationals, again, as in Canada and the United States.

The former reliance of states on nationalized flag carriers is yielding to greater privatization of national carriers, more freedom for national carriers to enter into marketing and investment agreements with carriers in other countries, and international development and use of a number of services, most notably Computer Reservation Services (CRSs). This globalization process will stretch the limits of the "nationality" requirement implicit in all international dealings so far, requiring states to entertain new concepts in their bilateral negotiations.

CRSs are recognized as being very powerful marketing and airline distribution tools that are not competitively benign. CRSs raise not only airline competition issues but also consumer protection issues that may have an anti-competitive impact beyond national boundaries. Some nations and international organizations have adopted codes of conduct or rules for CRSs to address these issues domestically and in some instances have entered into bilateral agreements to deal with the international dimension of anti-competitive behaviour generally. In Canada there are no rules or regulations of general application dealing specifically with CRSs. There are, however, rules which resulted from the Consent Order of the Competition Tribunal in the Gemini case. Unfortunately, those rules are limited in their application to Gemini and those who want equal access to Gemini. The author suggests, therefore, that something more needs to be done.

With the creation of regional trading blocks such as the European Community (EC) or the Andean Pact, the author foresees a circumstance where Canada may be asked to accept a foreign carrier as a designated carrier under a BASA when the designated carrier is not a "national" of the designating state. Further, Canada may be asked to negotiate a BASA with a trading block rather than with its member states. Within the current "nationality" requirement, such situations would create, amongst other things, difficulties with regard to international responsibility for aircraft operations.

Conclusions

Although Canadian laws would permit the acceptance of a designation of a foreign air carrier that was not substantially owned and effectively controlled in a single state, Canada cannot currently designate any airline other than a "Canadian" air carrier. Among other proposals made, the author concludes that consideration be given to amending the *NTA, 1987* to enable the designation by Canada of an air carrier from another state, in cases where the Minister considers it necessary or advisable in the public interest.

The author concludes that existing Canadian competition laws are adequate to deal with any anti-competitive behaviour of the air carriers in the international forum, with respect to joint marketing initiatives, code sharing, blocked space operations and other potentially anti-competitive air carrier activity. An expeditious procedure should exist for regulatory approval of such arrangements.

The author is of the opinion that regulation of CRSs falls within both federal and provincial jurisdiction. The existing aeronautical legislation (both the *Aeronautics Act* and the *NTA, 1987*) is inadequate to authorize regulations dealing directly with CRSs and statutory amendments would be required. It is suggested that the jurisdictional issues be addressed and that the substantive elements of CRS operation be regulated quickly and comprehensively. It is further proposed that federal and provincial legislation be "dovetailed" to ensure that the consumer protection and competition aspects of this issue are dealt with adequately.

There is general agreement in the international aviation community that the development of international aviation based on the system of bilateral air services agreements has reached its limits and that if aviation is to progress further, a more liberal and pro-competitive framework will have to be adopted. The author recommends that Canada seek to enter into multilateral agreements for the exchange of traffic rights and support the extension of the General Agreement on Trade in Services (GATS) under the General Agreement on Tariffs and Trade (GATT) to include related services such as maintenance, CRSs and other air carriage service marketing.

Domestically, the author proposes that the current limit of 25% foreign ownership of Canadian carriers be raised to 49% of voting equity and 75% of non-voting equity. It is also recommended that debt securities not be considered as an indicator of control if the loan does not provide any special rights to the lender. The author is of the opinion that these ratios will not violate the "nationality" requirement now in place in existing BASAs, but will stimulate much needed investment in Canada's airline industry.

The author proposes that the Agency adopt guidelines to assist investors to structure transactions in a manner that will satisfy the concerns of the National Transportation Agency. In addition to the publication of guidelines, all Agency decisions in respect of ownership should be published with reasons outlining the facts in sufficient detail, subject only to withholding highly sensitive commercial information.

THE *COMPETITION ACT* AND FEDERAL ECONOMIC REGULATION OF THE TRANSPORTATION SECTOR: A COMPARATIVE ASSESSMENT

Issue

The *Competition Act* establishes general rules of commercial conduct aimed at preventing anti-competitive behaviour and promoting industry efficiency and consumer welfare. The *NTA, 1987* and related legislation also establish a number of transport industry and mode-specific pricing standards which take the place of parallel *Competition Act* provisions on monopolistic pricing. This study identifies the current areas of overlap between the two Acts and comments upon where overlap may not be in the public interest. Further, the study assesses which regime should apply, identifies

aspects of the *Competition Act* which at present do not apply to federal transportation, and considers those areas where the marketplace may be more efficiently policed through the *Competition Act*.

Analysis

To a very large extent the commercial activities of federal transportation undertakings are already subject to the jurisdiction of the *Competition Act*. In a number of these areas (principally mergers), the *Competition Act* and the *NTA, 1987* effectively operate in parallel. Where in practical terms or for legal reasons the *NTA, 1987* or the *Shipping Conferences Exemption Act*, and not the *Competition Act*, govern business conduct (principally railway pricing and supply decisions and shipping conference agreements), provisions of the *Competition Act* would apply were the relevant industry-specific provisions to be repealed.

In effect, there is a considerable overlap in the application of the *Competition Act* and federal transportation regulation laws. In some cases, this overlap also involves potential duplication of administrative activities because the *Competition Act* expressly applies to activities also covered by the transportation regulatory law. The principal area where this occurs is mergers. In other cases, this overlap does not lead to administrative duplication because of the present practices of the Bureau of Competition Policy. Jurisdictional boundaries between the two regimes, however, are blurred. An example is anti-competitive low pricing and other monopolistic practices in the rail mode.

The relationship between industry-specific regulations and general competition law will come under more and more scrutiny as *Competition Act* measures relating to mergers, anti-competitive low pricing, abuse of dominant position, and agreements to lessen competition become better defined and consequently more effective. Progressive continued deregulation of federal transportation undertakings will continue to put pressure upon the jurisdictional and administrative boundaries between the two legal regimes.

The *Competition Act* predatory pricing and abuse of dominance provisions appear at present procedurally inadequate to deal effectively with this problem in the transportation sector. On the other hand, the substantive principles set out in the Predatory Pricing Guidelines established under the *Competition Act* are more consistent with economic theory and provide the maximum scope for truly pro-competitive low pricing. The *NTA, 1987* compensatory rail rates controls are procedurally more effective but the current threshold for actionability against low pricing under this scheme is excessively high. The current compensatory rates standard discourages beneficial price competition and ensuing gains in supplier and customer efficiency.

Abuse of market dominance by railways can be addressed by the general abuse of dominance practice of the *Competition Act* or the detailed service obligation and consumer empowerment measures of Part III of the *NTA, 1987*. While the *Competition Act* abuse of dominance scheme is potentially attractive, this scheme is very young law.

On the other hand, Part III, which can be likened to the kind of remedial order that might be issued ultimately under the *Competition Act*, appears to have operated effectively to increase intra-modal competition without a significant degree of regulatory intervention.

The exemption of shipping conferences from conspiracy prosecution under the *Competition Act* is not necessary to ensure security of supply of shipping capacity. Because Canadian port container terminal facilities are available on a non-discriminatory basis and an overcapacity of suitable container ships exists, economic barriers for entry into the liner shipping trade are not high.

The design of regulatory statutes can play a vital role in facilitating the adaption of regulated industries to changing market circumstances. Equally, regulatory statutes that do not keep pace with business realities can undermine the evolution and future competitiveness of industries they govern.

Conclusions

With respect to mergers and acquisitions, the author concludes that there is unnecessary overlap and duplication between the parallel *Competition Act* and *NTA, 1987* provisions. The *NTA* scheme is perceived as being too sweeping and unnecessarily costly. The author's preferred option would be to rely exclusively on the better developed merger provisions of the *Competition Act*.

For anti-competitive low pricing, the preferable option in the author's view would be to import into the *NTA, 1987* the superior thresholds of the *Competition Act* for anti-competitive low pricing and the latter Act's methods for calculating price floors.

The study prefers the option of retaining *NTA, 1987*, Part III for the time being but with amendments to narrow the level of service obligation to monopoly markets, and to adopt the recommended lower cost threshold for compensatory rates determination.

In the author's opinion, there would no longer appear to be any rationale for the maintenance of the *SCEA, 1987* conspiracy law exemption and it is concluded that *SCEA, 1987* should be repealed.

REPORT ON THE PUBLIC INTEREST INVESTIGATION PROVISIONS OF THE *NTA, 1987*

Issue

This study was commissioned to consider whether the apparent procedural and substantive vagueness and complexity of the complaint investigation provisions of the *NTA, 1987* are barriers to effective use of this consumer remedy. The study was also to develop options to improve procedural and substantive certainty through amendments to sections 58-63 if the analysis determined that these sections should be maintained.

Analysis

The structure of the scheme was examined in relation to other shippers' remedies under the *NTA, 1987* in order to determine those issues for which the public interest scheme may be the only remedy. Special consideration was given to the expected utility of final offer arbitration in addressing situations of monopoly power abuse.

Jurisprudence under the scheme was examined in order to assess the reasons for selecting the public interest investigation option, the results of such investigations for shippers and carriers, and the value of this jurisprudence in reducing uncertainties arising from activation of the scheme. The review is supplemented by a stakeholder analysis based upon interviews with participants in public interest investigations, and other parties.

Rather than being a means of adjudicating issues that transcend private commercial considerations, public interest complaints have, in practice, been used as a shipper's bargaining chip to obtain more favourable commercial terms from the carrier. Complaints are frequently withdrawn once the carrier offers more. No complaint which has proceeded to an Agency decision has resulted in a finding that the carrier's conduct was prejudicial to the public interest.

The basis for provincial and some shipper support for the retention of this measure would appear to be a desire to have available a vehicle by which to impose, through regulatory action, cross-subsidized rates in order to provide a boost to regional development aspirations or to favour some shippers or industries over their competitors in other parts of Canada.

The rail mode, and other modes currently subject to the public interest investigation scheme, no longer possess the public good or natural monopoly public utility characteristics that may once have justified their use as a subsidy instrument. The author believes that maintenance of an investigation scheme whose principal value-added is to impose cross-subsidies on unwilling carrier management is inconsistent with the overall thrust of the *NTA, 1987* and the general direction of transportation regulatory reform — recognition that the industry is competitive, that market forces can and should be relied on to set prices and service characteristics, and that legislation should create incentives for greater economic efficiency.

Conclusions

The study finds that the potential substantive value-added of the scheme (i.e., what it alone and not other *NTA, 1987* remedies can achieve) is to provide a means of requiring cross-subsidized services to be supplied where to do so is not in the commercial interests of the carrier. This is potentially a very narrow application given the general presumption of the *NTA, 1987* in favour of competition and market forces.

Although prevention of high monopoly prices is a further possible application of the public interest provisions, Part III of the *NTA, 1987* and final offer arbitration, in the author's view, provide a package of measures which can be used by shippers effectively

to prevent high monopoly prices in the rail mode — the only mode where there remains some potential for such pricing.

The study concludes that there is very little if any continuing public policy justification for a public interest override scheme in federal transportation regulation law. However, if such a measure is retained, its availability should be restricted to matters which raise general economic or social welfare issues that clearly, in the view of the Agency, transcend the private commercial interests of the complainant(s).

The study also suggests that incentives be created to divert private shipper-carrier disputes to final offer arbitration, and, thereby, away from the public interest investigation process, if it is retained.

Appendices

Appendix 1

Economic Research Studies

Author

Subject and description

Canadian Institute of Guided
Ground Transport (CIGGT)
Queen's University,
Kingston, Ontario)

U.S. Trucking Review — Performance, Structural Change and Deregulation

This study reviews the performance and structural changes within the U.S. trucking industry following deregulation and recession and assesses the likelihood of similar outcomes for the Canadian industry.

Canarail Inc.
(Montreal, Quebec)

Access to Competitive Rail Services

The study assesses the extent to which the provisions of the *NTA, 1987*, aimed at providing greater access to competitive rail services to Canadian shippers, have achieved their objectives. It includes an analysis of the impact of confidential contracts, CLRs and extended interswitching on shippers and^d on the railways' competitive ability versus other modes of transport, particularly trucking.

Michel Champoux
(NTARC staff)

Modal Report on the Rail Industry

This working paper sets out the regulatory and market environment influencing the railway industry's development in the years prior to the 1987 legislation. The *NTA, 1987* and its effect on shippers and carriers are then examined, including the impact on CN and CP long-term financial viability. Drawing on contract research and submissions by

stakeholders, it discusses the outstanding issues affecting the future of Canadian railways.

John Cowan
(NTARC staff)

Modal Report on the Marine Industry

This working paper reviews a number of issues, primarily the impact of the *Shipping Conferences Exemption Act* on Canadian shippers and of regulations affecting barging operations in northern remote regions. It also examines the role and future of the St. Lawrence Seaway, the Great Lakes fleet, the Canadian ports administration and associated marine activities.

Dr. Jed Fisher
(University of Alberta, Edmonton,
Alberta)

Employment and Management-Labour Relations Assessment

The study examines the repercussions of changes in the level and conditions of employment in the transportation sector since 1985. It also discusses changes in management-labour relations since the mid 1980s.

Gough & Gray Group, Inc.
(Carlisle, Ontario)

A Comparison of Canadian and U.S. (Highway) Carrier Management Approaches

This study provides a comparison of U.S. and Canadian trucking management styles based on the consultant's exposure to U.S. post deregulation high efficiency carriers.

David C. Hackston
(Research and Traffic Group,
Ottawa, Ontario)

Discussion of Some Suggested Changes to Competitive Line Rates

This working paper discussed eight potential options for modifying the competitive line rate provisions in the rail section of the *NTA, 1987*.

Hickling Corporation
(Ottawa, Ontario)

Transportation Subsidies in Canada

This study develops estimates of transportation subsidies in Canada for all principal modes including highways, railways, aviation and marine by the three levels of government. While the study focuses on the current level of subsidies, the results are presented in the context of historic trends.

IBI Group
(Toronto, Ontario)

Railway Financial Viability

This study assesses the impact of the *NTA, 1987* and current taxation and fiscal policies on the commercial and financial viability of CN Rail and CP Rail and determines the ability of the railways to generate sufficient capital to meet their investment requirements in the long term.

Lykos International Inc.
(Ottawa, Ontario)

Overview of Effects of Lessened Regulation on Air Transport

This working paper gives an overall summary of the effects of regulatory change in air transport.

Merrett, Mitchell & Associates
(Winnipeg, Manitoba)

Industry Concentration and Foreign Ownership in the Canadian Trucking Industry

The study reviews evidence of concentration and foreign ownership in the Canadian trucking industry. U.S. presence in the marketplace through the acquisition of transborder operating authorities is also examined.

Fred P. Nix
(Orangeville, Ontario)

The Impact of Weight and Dimension Regulations on Trucking

This study examines the extent to which standardization in vehicle size and weight limits has occurred in Canada and the mechanisms by which it has been achieved. It identifies existing situations which may inhibit efficient transportation and trade among Canadian jurisdictions or between Canada and the U.S.

Peat Marwick Stevenson & Kellogg
(PMS&K, Montreal, Quebec)

Canadian Shippers' Needs Assessment

For all modes of transport, an assessment is made of Canadian shippers' needs, attitudes and competitiveness within the North American market from a logistics perspective. This includes references to current and emerging logistics practices, identification of the extent to which these can be followed effectively within the Canadian transportation legislative and regulatory environment and a comparative assessment with the regime in the U.S.

Alex Phillips
(Victoria, B.C.)

Modal Report on Northern Air Services

This working paper examines the impact of a liberalized regulatory policy on air transport services in northern Canada. It analyzes price and service levels, as well as reviewing problems associated with operating practices, licensing and the industry structure.

Dr. Barry P. Prentice
(University of Manitoba Transport
Institute, Winnipeg, Manitoba)

Impact of Extra-Provincial Deregulation on Intra-Provincial Trucking Operations

This study examines the impact of changes in extraprovincial deregulation on intraprovincial trucking operations and the markets they serve. The need for further change in intraprovincial trucking regulation is examined with reference to the lack of uniformity among jurisdictions in granting intraprovincial operating authority.

Arvo Ray
(NTARC staff)

Report on Intermodal Transport

This working paper traces the evolution of intermodalism in North America and assesses the impact of the *NTA, 1987* on intermodal transport in Canada. In addition, it examines the regulatory changes in the United States and other external factors affecting the industry. It discusses the anticipated developments in intermodal transport over the next decade and into the early 2000s.

Research and Traffic Group
(Ottawa, Ontario)

Cooperative Rail Sharing Barriers and Options

The report examines the mechanisms and corporate behaviour which determine the success of plans for co-operative rail sharing with attendant abandonment of one of two

parallel lines. It uses the area north of Lake Superior as a case study to evaluate what measures need to be taken to overcome the barriers associated with rail rationalization.

Dr. Konrad Studnicki-Gizbert
(Chelsea, Quebec)

Modal Report on Southern Air Service

This working paper reviews the effects of deregulation of the air transport industry in southern Canada. It provides an analysis of the structural developments within the industry as well as reviewing pricing trends, safety and the financial performance of the major carriers.

Sypher:Mueller
(Ottawa, Ontario)

Canadian Transportation Policy and the Environment

This report analyzes the impact of transportation systems and operations on the environment and the impact of federal environmental legislation on transportation systems. It concludes with an analysis of how transport legislation could better reflect the aims of current environmental legislation.

Sypher:Mueller
(Ottawa, Ontario)

Factors Underlying Recent Airline Performance in Canada

This study reviews the airline industry over the period 1981-1992 and identifies factors responsible for its current weaknesses. The study addresses the extent to which the objectives of economic regulatory reform have been met and includes an examination of government policy options for addressing the current problems of the industry.

Rod B. Taylor
(NTARC staff)

Modal Report on the Trucking Industry

This working paper sets out the regulatory and market environment influencing the trucking industry's development in the years prior to the 1987 legislation. The *MVTA* and its effect on shippers and carriers is then examined, including regional differences relating to the varying provincial approaches. Drawing on contract research and submissions by stakeholders, it identifies and discusses the outstanding issues affecting the trucking industry's future.

Appendix 2

Legal Research Studies

Author

Subject and description

Gowling, Strathy & Henderson
(Ottawa, Ontario)

Rail Line Abandonment

This study examines the efficacy and adequacy of the rail line abandonment provisions of the *NTA, 1987* and the National Transportation Agency's administrative practises and procedures with respect to these provisions in light of the goals of the Act and comments made in submissions to the Review Commission. Where it is concluded that the existing statutory/regulatory rail line abandonment scheme can be improved, suggestions are made as to how the statute/regulations could be amended to incorporate such improvements.

Lexenomics
(Fraser & Beatty, Ottawa, Ontario)

Facilitating Short Line Railway Transactions in Canada

This study assesses whether there exist legislative, institutional or economic barriers to the creation of short line railways in Canada. Consideration is given to what measures are available through legislative reform to encourage a more active short line market in Canada, if such is determined to be desirable, and to what governments (federal and provincial) can do to promote such development. Among the factors considered are the apparent disincentives

provincial governments have to permit the establishment of short line rail in light of concerns for the long-term viability of short lines after the removal of federal regulatory and financial supports. Consideration is also given to methods which might exist to remove/negate such disincentives.

Aubut, Chabot
(Quebec City, Quebec)

Mechanisms for Managing Abandoned Railway Rights-of-Way in Canada

If, in the course of rail line abandonment, the continued existence of certain rail corridors is assumed to be in the public interest (such as recreational purposes, strategic purposes or possible future commuter transit use), this study considers how from a legal and administrative policy perspective such rail corridor maintenance might be achieved recognizing Canadian constitutional realities and the common/civil law duality concerning real property.

Lavery, de Billy
(Montreal, Quebec)

Slot Allocations and Other Airport Infrastructure Restrictions

Against the backdrop of such recent developments as the advent of autonomous local airport authorities, this study examines the existing legal and policy mechanisms by which access to airports is controlled and, in light of recent practice and history (such as at Toronto-Pearson), makes recommendations concerning what alternative legal and institutional structures might better promote more competitive and efficient access by air carriers to airport infrastructure.

Lavery, de Billy
(Montreal, Quebec)

International Air Route Allocations

This study was commissioned to review the process currently in place in Canada for the selection, designation and licensing of air carriers to operate international air routes after such routes have been obtained by the federal government in the course of the international air route bilateral negotiation process. It explores the legal implications of charging an autonomous body (other than Transport Canada and perhaps such as the National Transportation Agency) with authority to play a role in this process.

Lavery, de Billy
(Montreal, Quebec)

Globalization of Aviation and the Existing Domestic and International Framework

This study analyzes whether the current domestic and international legal framework within which aviation exists is sufficiently flexible and responsive to accommodate fully the move toward globalization of aviation. Where the framework is considered insufficient, the study mandate included the identification of legal and administrative impediments and the suggestion of solutions.

Lexenomics
(Fraser & Beatty, Ottawa, Ontario)

The Competition and Federal Economic Regulation of the Transportation Sector: A Comparative Assessment

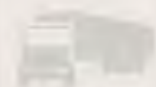
The *Competition Act* establishes general rules of commercial conduct aimed at preventing anti-competitive behaviour, and promoting industry efficiency and consumer welfare. The *NTA, 1987* and related legislation

also establish a number of transport industry and mode-specific pricing standards which take the place of parallel *Competition Act* provisions on monopolistic pricing. This study identifies the current areas of overlap between the two Acts and comments upon where overlap may not be in the public interest. Further, the study assesses which regime should apply, identifies aspects of the *Competition Act* which at present do not apply to federal transportation, and considers those areas where the marketplace may be more efficiently policed through the *Competition Act*.

Lexenomics
(Fraser & Beatty, Ottawa, Ontario)

**Report on the Public Interest
Investigation Provisions of the *NTA*, 1987**

This study was commissioned to consider whether the apparent procedural and substantive vagueness and complexity of the complaint investigation provisions of the *NTA*, 1987 are barriers to effective use of this consumer remedy. The study was also to develop options to improve procedural and substantive certainty through amendments to sections 58-63 if the analysis determined that these sections should be maintained.



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